Exhibit 1 REDACTED VERSION OF ECF No. 78-1

1	BAKER BOTTS L.L.P.										
2	Jeremy J. Taylor (SBN 249075) jeremy.taylor@bakerbotts.com										
3	Arya Moshiri (SBN 324231) arya.moshiri@bakerbotts.com										
4	101 California St., Ste. 3600 San Francisco, CA 94111										
5	Telephone: 415.291.6200 Facsimile: 415.291.6300										
6	Bethany R. Salpietra (pro hac vice pending)										
7	bethany.salpietra@bakerbotts.com 2001 Ross Ave., Ste. 900 Dallas, TX 75201										
8	Telephone: 214.953.6500 Facsimile: 214.953.6503										
9											
10	Attorneys for Plaintiff										
11	UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA										
12											
13	LYFT, INC.	Case No. 21-cv-4653									
14	Plaintiffs,										
15	v.	FIRST AMENDED COMPLAINT FOR DECLARATORY JUDGMENT									
16	AGIS SOFTWARE DEVELOPMENT LLC, ADVANCED GROUND INFORMATION	FILED UNDER SEAL									
17	SYSTEMS, INC., AGIS HOLDINGS, INC., MALCOM K. BEYER, JR.	JURY TRIAL DEMANDED									
18	Defendants.										
19											
20	Plaintiff Lyft, Inc. ("Lyft") hereby pleads	the following claims for Declaratory Judgment									
21	against Defendants AGIS Software Development LLC ("AGIS Software"), Advanced Ground										
22											
23	Information Systems, Inc. ("AGIS, Inc."), AGIS Holdings, Inc. ("AGIS Holdings"), and Malcolm										
24	K. Beyer, Jr. ("Beyer") (collectively "AGIS") and alleges as follows:										
25	THE PARTIES										
26	Lyft is a Delaware corporation w	ith its principal place of business located at 185									
27	Berry Street, Suite 5000, San Francisco, California 94107.										
28											

- 2. On information and belief, AGIS Software is a Texas limited liability company, having its principal place of business at 100 W. Houston Street, Marshall, Texas 75670, and is a wholly owned subsidiary of AGIS Holdings.
- 3. AGIS Software alleges that it is the owner of all right, title, and interest to United States Patent Nos. 7,031,728 ("'728 patent"), 7,630,724 ("'724 patent"), 8,213,970 ("'970 patent"), 10,299,100 ("'100 patent"), and 10,341,838 ("'838 patent") (collectively, "Patents-in-Suit").
- 4. Lyft disputes whether AGIS Software holds proper title to at least the '724, '100, and '838 Patents due to named inventor Christopher Rice's employment with Microsoft Corporation at the time the '724, '100, and '838 Patents, or their parent applications, were filed.
- 5. In June 2017, AGIS, Inc. assigned the Patents-in-Suit to AGIS Holdings, and on the same day, AGIS Holdings assigned the Patents-in-Suit to AGIS Software.
- 6. On information and belief, AGIS Holdings is organized under the laws of the State of Florida and maintains its principal place of business at 92 Lighthouse Drive, Jupiter, FL 33469.
 - 7. AGIS Holdings is the sole member of AGIS Software.
- 8. On information and belief, AGIS, Inc. is organized under the laws of the State of Florida and maintains its principal place of business at 92 Lighthouse Drive, Jupiter, FL 33469.
 - 9. AGIS, Inc. is a wholly owned subsidiary of AGIS Holdings.
 - 10. Malcolm K. Beyer, Jr. is the named inventor of the Patents-in-Suit
- 11. Malcolm K. Beyer, Jr. is the CEO of AGIS Software, AGIS Holdings, and AGIS, Inc.
 - 12. Malcolm K. Beyer, Jr. resides at 92 Lighthouse Drive, Jupiter, FL 33469.

JURISDICTION AND VENUE

13. The Court has subject matter jurisdiction over Lyft's declaratory judgment claims relating to patent non-infringement under 28 U.S.C. §§ 2201, 2202, 1331, and 1338(a).

A. AGIS Software accused Lyft of infringing the Patents-in-Suit

14. On January 29, 2021, AGIS Software sued Lyft for alleged past and current infringement of the Patents-in-Suit in the United States District Court of the Eastern District of Texas by manufacturing, using, distributing, selling, offering for sale, and/or exporting from and

12

13

14 15

16

17

18

19

20 21

22

23

24

25 26

27

28

importing into the United States the "the Lyft and Lyft Driver applications and the related services and/or servers for the applications." See AGIS Software Development LLC v. Lyft, Inc., Civil Action No. 2:21-cv-00024-JRG (E.D. Tex.), Dkt. 1 at ¶ 23.

- 15. On April 27, 2021 Lyft moved to dismiss the Eastern District of Texas litigation for improper venue. See AGIS Software Development LLC v. T-Mobile USA, Inc. et al., Civil Action No. 2:21-cv-00072-JRG (E.D. Tex.), Dkt. 30.
- 16. On November 10, 2021, Magistrate Judge Payne issued a Report and Recommendation that Lyft's motion to dismiss be granted. See AGIS Software Development LLC v. T-Mobile USA, Inc. et al., Civil Action No. 2:21-cv-00072-JRG (E.D. Tex.), Dkt. 212.
- 17. On January 19, 2022, the Court adopted the Magistrate's Report and Recommendation and directed the clerk of the Court to close the case. See AGIS Software Development LLC v. T-Mobile USA, Inc. et al., Civil Action No. 2:21-cv-00072-JRG (E.D. Tex.), Dkt. 334.

B. Lyft seeks a declaratory judgment that it does not infringe the Patents-in-Suit

- 18. Lyft denies that the Patents-in-Suit have been or currently are infringed through the making, using, distributing, sale, offering for sale, exportation, or importation of the Lyft or Lyft Driver applications and any related services and/or servers for the applications.
- 19. AGIS Software's infringement allegations and related actions threaten actual and imminent injury to Lyft that can be redressed by judicial relief and warrants the issue of a declaratory judgment, under the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 et seq.
- 20. An actual and justiciable controversy with respect to the Patents-in-Suit exists between Lyft and AGIS Software and between Lyft and AGIS, Inc., AGIS Holdings, and/or Malcolm K. Beyer, Jr. under an alter ego theory.

C. AGIS Software is subject to the specific jurisdiction of this Court

21. AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. are subject to this Court's specific jurisdiction, pursuant to due process and/or the California Long Arm Statute due to: (1) AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. purposefully directing activities at residents of this forum, and (2) the claims arising out of or relating to these

activities of AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. Further, the assertions of personal jurisdiction are reasonable and fair.

- i. AGIS Software purposefully directed its patent licensing activities to California companies subjecting it to specific jurisdiction under *Trimble*
- 22. AGIS Software is a patent licensing company that licenses its patent portfolio, including the Patents-in-Suit.
 - 23. AGIS Software has no employees.
 - 24. AGIS Software develops software related to the Patents-in-Suit.
- 25. Software developed by AGIS Software is both used inside and outside the United States.
- 26. On information and belief, software developed by AGIS Software related to the Patents-in-Suit is used within California. Lyft attempted to confirm this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 27. AGIS Software's principal source of revenue is from patent licenses with California companies and other companies operating in the State of California.
- AGIS Software or its predecessor-in-interest has taken purposeful steps to enforce the Patents-in-Suit and/or obtain licenses to the Patents-in-Suit and/or related patents with companies having principal places of business and operations in this judicial district, including Lyft, Google LLC ("Google"), Apple Inc. ("Apple"), WhatsApp LLC ("WhatsApp"), Facebook, Inc. ("Facebook"), Uber Technologies, Inc. d/b/a UBER ("Uber"), Life360, Inc. ("Life360"), and with companies or their affiliates having operations and offices in the State of California, including ZTE (USA) Inc. ("ZTE"), Waze LLC ("Waze"), HTC Corporation ("HTC"), T-Mobile US, Inc. ("T-Mobile"), Huawei Device USA Inc. ("Huawei"), LG Electronics, Inc. ("LG"), and Samsung Electronics America, Inc ("Samsung").
- 29. On information and belief, AGIS Software or its predecessor-in-interest has taken purposeful steps to enforce the Patents-in-Suit and/or obtain licenses to the Patents-in-Suit and/or

related patents with Smith Micro Software ("Smith Micro"), a company having operations and offices in the State of California. Lyft attempted to confirm this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it. On information and belief, this information could have also been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

- 30. AGIS Software or its predecessor-in-interest alleged infringement of the Patents-in-Suit and/or related patents through communications directed at companies with principal places of business in this judicial district, including Google, Facebook, and Life360.
- 31. AGIS Software or its predecessor-in-interest enforced the Patents-in-Suit and/or related patents against companies with principal places of business in this judicial district, including Lyft, Google, Apple, WhatsApp, Uber, Life360, and against companies or their affiliates having operations and offices in the State of California, including ZTE, Waze, HTC, T-Mobile, Huawei, LG, and Samsung.

32.

33. On information and belief, AGIS Software negotiated a license agreement involving the Patents-in-Suit and/or related patents through communications with Smith Micro, a company having operations and offices in the State of California. Lyft attempted to confirm this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it. On

10

11 12

13

14 15

16

17 18

19

20

21

22 23

24

25

26

27

28

information and belief, this information could have also been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

- 34. On information and belief, AGIS Software or its predecessor-in-interest have negotiated and communicated with Google, Waze, and Samsung in an attempt to enter into license agreements for the Patents-in-Suit and/or related patents. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 35. AGIS Software's communications, including through telephone, mail, and/or other means, with companies having principal places of business, offices, and/or operations in the State of California to enforce and to negotiate licenses the Patents-in-Suit and/or related patents creates specific personal jurisdiction over AGIS Software. See Trimble Inc. v. PerDiemCo LLC, 997 F.3d 1147, 1155 (Fed. Cir. 2021).
- 36. AGIS Software's non-exclusive licenses to the Patents-in-Suit with companies having principal places of business, offices, and operations in the State of California are sufficiently related to this declaratory judgment action concerning the same patents to support a finding of specific jurisdiction. *Id.* at 1156.

a. AGIS Entities' patent license with Apple and related negotiations

- 37. On June 21, 2017, AGIS Software sued Apple, a California corporation with its principal place of business in this District in Cupertino, California, alleging infringement of the '970 Patent, one of the Patents-in-Suit, and other patents related to the Patents-In-Suit. See AGIS Software Development LLC v. Apple Inc., Civil Action No. 2:17-cv-00516 (E.D. Tex.), Dkt. 1 at ¶¶ 6-9, 18, 27, 41, 55.
- 38. On information and belief, Apple currently has or previously had headquarters at 1 Apple Park Way Cupertino, California 95014.

- 39. On information and belief, in or around March 2019, AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. (collectively, "AGIS Entities") entered into a license agreement with Apple ("Apple License") covering all patents and patent applications assigned to, owned by, or controlled by the AGIS Entities, including the Patents-in-Suit. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 40. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with Apple to obtain the Apple License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

b. AGIS Software's patent license with Huawei and related negotiations

- 41. On June 21, 2017, AGIS Software sued Huawei Device USA Inc., Huawei Technologies USA Inc., and Huawei Technologies Co., Ltd. alleging infringement of patents, including the '970 Patent, one of the Patents-in-Suit. *AGIS Software Development LLC v. Huawei Device USA Inc.*, Civil Action No. 2:17-cv-00513 (E.D. Tex.), Dkt. 1 at ¶¶ 8-11, 20, 29, 42, 55.
- 42. On August 17, 2017, AGIS Software filed an amended complaint, adding Huawei Device (Dongguan) Co., Ltd. as a defendant.
- 43. On information and belief, Huawei currently has or previously had an affiliate office in California.
- 44. On information and belief, in or around March 2019, AGIS Software entered into a license agreement with Huawei ("Huawei License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But

AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

45. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with Huawei to obtain the Huawei License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

c. AGIS Software patent license with HTC and related negotiations

- 46. On June 21, 2017, AGIS Software sued HTC Corporation alleging infringement of patents, including the '970 Patent, one of the Patents-in-Suit. *AGIS Software Development LLC v. HTC Corporation*, Civil Action No. 2:17-cv-00514 (E.D. Tex.), Dkt. 1 at ¶¶ 6-9, 18, 27, 40, 53.
- 47. On information and belief, HTC currently has or previously had an affiliate office in California.
- 48. On information and belief, in or around July of 2019, AGIS Software entered into a license agreement with HTC ("HTC License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 49. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with HTC to obtain the HTC License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

d. AGIS Software patent license with LG and related negotiations

- 50. On June 21, 2017, AGIS Software sued LG Electronics, Inc. alleging infringement of patents, including the '970 Patent, one of the Patents-in-Suit. *AGIS Software Development LLC v. LG Electronics, Inc.*, Civil Action No. 2:17-cv-00515 (E.D. Tex.), Dkt. 1, ¶¶ 6-9, 18, 27, 40, 53.
- 51. On information and belief, LG currently has or previously had an affiliate office in California.
- 52. On information and belief, in or around July 2019, AGIS Software entered into a license agreement with LG ("LG License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 53. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with LG to obtain the LG License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

e. AGIS Software patent license with ZTE and related negotiations

- 54. On June 21, 2017, AGIS Software sued ZTE Corporation and ZTE (TX) Inc. alleging infringement of patents, including the '970 Patent, one of the Patents-in-Suit. *AGIS Software Development LLC v. ZTE Corporation et al.*, Civil Action No. 2:17-cv-00517-JRG (E.D. Tex.), Dkt. 1 at ¶¶ 7-10, 19, 28, 41 54.
- 55. On October 17, 2017, AGIS Software filed an amended complaint, adding ZTE (USA) Inc. as a defendant to this litigation and alleging infringement of an additional related patent, the '829 patent. *AGIS Software Development LLC v. ZTE Corporation et al.*, Civil Action No. 2:17-v-00517-JRG (E.D. Tex.), Dkt. 32 at ¶¶ 3 & 73.

- 56. On information and belief, ZTE or a ZTE affiliate currently has or previously had an office located in California.
- 57. On information and belief, in or around October 2019, AGIS Software entered into a license agreement with ZTE ("ZTE License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 58. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with ZTE to obtain the ZTE License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

f. AGIS Software patent license with WhatsApp and Facebook and related negotiations

- 59. On January 29, 2021, AGIS Software sued WhatsApp, a corporation having its principal place of business in this District in Menlo Park, California, alleging infringement of the '728 Patent and '724 Patent, two of the Patent-in-Suit, and alleging infringement of other patents related to the Patents-In-Suit. *See AGIS Software Development LLC v. WhatsApp, Inc.*, Civil Action No. 2:21-cv-00029 (E.D. Tex.), Dkt. 1 at ¶¶ 7-12, 21, 40, 59, 78, 97, 116.
- 60. On information and belief, WhatsApp currently has or previously had an office in California.
- 61. In or around September 2021, AGIS Software entered into a license agreement with WhatsApp and Facebook ("WhatsApp/Facebook License") covering all patents and patent applications held or controlled by AGIS Software, including the Patents-in-Suit.

- 62. On information and belief, Facebook currently has or previously had an office in California.
- 63. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with WhatsApp and/or Facebook to obtain the WhatsApp/Facebook License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

g. AGIS Software patent license with Uber and related negotiations

- 64. On January 29, 2021, AGIS Software sued Uber alleging infringement of all five of the Patents-in-Suit. *AGIS Software Development LLC v. Uber Technologies Inc.*, *d/b/a Uber*, Civil Action No. 2:21-cv-00026 (E.D. Tex.), Dkt. 1 at ¶ 18-22, 30, 46, 62, 77, 95.
- 65. On information and belief, Uber currently has or previously had an office in California.
- 66. On information and belief, in or around March of 2022, AGIS Software entered into a license agreement with Uber ("Uber License") covering all patents and patent applications held or controlled by AGIS Software, including the Patents-in-Suit. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 67. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with Uber to obtain the Uber License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

h. AGIS Software patent license with T-Mobile and related negotiations

- 68. On March 3, 2021, AGIS Software sued T-Mobile alleging infringement of patents including the '728 Patent and the '724 Patent, two of the Patents-in-Suit. *AGIS Software Development LLC v. T-Mobile USA, Inc.*, Civil Action No. 2:21-cv-00072 (E.D. Tex.), Dkt. 1 at ¶¶ 7-12, 24, 46, 67, 98, 120, 147.
- 69. On information and belief, T-Mobile or a T-Mobile affiliate currently has or previously had an office in California.
- 70. On information and belief, in or around November of 2021, AGIS Software entered into a license agreement with T-Mobile ("T-Mobile License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 71. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with T-Mobile to obtain the -Mobile License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

i. AGIS Software patent license with Smith Micro and related negotiations

- 72. On May 17, 2021, Smith Micro sued AGIS Software for a declaratory judgment that Smith Micro did not infringe certain of AGIS Software's patents, including the '728 and '724 Patents, and that said patents were further invalid. *Smith Micro Software, Inc. v. AGIS Software Development LLC*, Civil Action No. 5:21-cv-03677 (N.D.Cal.), Dkt. 1 at ¶¶ 16, 50, 55, 60, 65, 70, 75, 81, 88, 96, 103, 110, 117.
- 73. On information and belief, Smith Micro currently has or previously had an office located in California.

- 74. On information and belief, in or around October 2021, AGIS Software entered into a license agreement with Smith Micro ("Smith Micro License") covering all patents and patent applications owned or controlled by AGIS Software or its affiliates. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 75. On information and belief, AGIS Software negotiated, including through numerous written email and/or other communications, with Smith Micro to obtain the Smith Micro License. Lyft requested this information from AGIS Software via an interrogatory (i.e., Jurisdictional Interrogatory No. 1), but AGIS Software has refused to provide it. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

j. AGIS, Inc.'s negotiations with Life360

- 76. On information and belief, AGIS, Inc. sent a letter to Life360, a company headquartered in San Francisco, California, on May 13, 2014 alleging infringement of AGIS's patents, expressing a willingness to engage in discussions regarding "royalty bearing licensing terms," and stating that "Life360 and its customers must cease and desist from further infringement" in the absence of a license. *See Advanced Ground Information Sys., Inc. v. Life360, Inc.*, Civil Action No. 9:14-cv-80651 (S.D. Fla.), Dkt. 181 (Transcript of Jury Trial Proceedings Day 1 held on Mar. 9, 2015) at 87:2-7.
- 77. Three days later, on May 16, 2014, AGIS, Inc. sued Life360 alleging infringement of the '728 Patent, one of the Patents-in-Suit, and related patents. *Advanced Ground Information Sys., Inc. v. Life360, Inc.*, Civil Action No. 9:14-cv-80651 (S.D. Fla.), Dkt. 1 at ¶¶ 2, 16, 25, 34, 43.
- 78. On information and belief, Life360 currently has or previously had an office located in California.
- 79. On information and belief, AGIS, Inc. negotiated, including through numerous written email and/or other communications, with Life360 to attempt to license AGIS's patents. Lyft

requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- ii. AGIS Software is a sham entity created to avoid jurisdiction and the corporate structure should be ignored under *Dainippon*
- 80. On June 1, 2017, twenty days before filing a patent infringement lawsuit against Apple and ZTE, AGIS Software was created as a Texas LLC to hold and manage intellectual property asserts previously owned by AGIS, Inc.
 - 81. On June 15, 2017, AGIS, Inc. assigned the Patents-in-Suit to AGIS Holdings.
 - 82. On the same day, AGIS Holdings assigned the Patents-in-Suit to AGIS Software.
 - 83.
 - 84.
- 85. Both AGIS, Inc. and AGIS Software are subsidiaries of AGIS Holdings.
- 86. Malcom K. Beyer, Jr., the named inventor of the Patents-in-Suit, is the CEO of AGIS Software, AGIS Holdings, and AGIS, Inc.
- 87. On information and belief, AGIS Software shares business addresses with AGIS Holdings and AGIS, Inc. at 92 Lighthouse Drive, Jupiter, FL 33469. Lyft requested this information from AGIS, Inc. and AGIS Holdings via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). AGIS, Inc., AGIS Holdings and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
 - 88. AGIS Software does not have any employees.

1	
2	
3	
4	defe
5	Cali
6	
7	is a
8	anal
9	Goo
10	Cal.
11	
12	
13	
14	egos
15	cons
16	
17	
18	
19	
20	
21	their
22	parti
23	subp
24	to pi
25	
26	
27	
28	

89.	AGIS	Software'	's prin	cipal	source	of	revenue	is	from	patent	licenses

- 90. AGIS, Inc. has regular contacts with California as discussed in Paragraphs 125-152.
- 91. As a result of its 2017 reorganization, AGIS Software argues that it is insulated from defending declaratory judgment actions in the State of California despite AGIS, Inc.'s contacts with California.
- 92. The creation of AGIS Software to insulate AGIS, Inc. from declaratory jurisdiction is an improper use of the corporate structure and should be disregarded for the jurisdictional analysis. *See Dainippon Screen Mfg. Co., Ltd. v. CFMT, Inc.*, 142 F.3d 1266, 1271 (Fed. Cir. 1998); *Google Inc. v. Rockstar Consortium U.S. LP*, No. C 13-5933-CW, 2014 WL 1571807, at *4 (N.D. Cal. 2014).

iii. AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. are alter egos of each other

- 93. AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. are alter egos of each other, and contacts with the State of California by any of the AGIS entities should be considered in the personal jurisdiction analysis.
 - 94. AGIS Software self-describes as an "inanimate entity."
 - 95. AGIS Software is inadequately capitalized.
 - 96. AGIS Software's principal source of revenue is from patent licenses.
 - 97. AGIS Software, AGIS Holdings, and AGIS, Inc. commingle funds and other assets.
- 98. On information and belief, AGIS, Inc. and AGIS Holdings transfer funds between their bank accounts to pay expenses when one does not have an adequate revenue source for a particular time period. Lyft requested this information from AGIS, Inc. and AGIS Holdings via subpoenas issued by Lyft on February 4, 2022, but both AGIS, Inc. and AGIS Holdings have refused to provide this information.

99.			

100.

- 101. On information and belief, proceeds from lawsuits filed by AGIS Software involving the Patents-in-Suit were paid to AGIS, Inc. or AGIS Holdings rather than AGIS Software. Lyft requested this information from AGIS, Inc. and AGIS Holdings via subpoenas issued by Lyft on February 4, 2022, but both AGIS, Inc. and AGIS Holdings have refused to provide this information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 102. AGIS Software and AGIS, Inc. each claim the LifeRing products to be their product, and each represent that the LifeRing products practice at least one claim of the Patents-In-Suit.
- 103. AGIS Software, AGIS Holdings, and AGIS, Inc. disregard corporate formalities and fail to maintain an arm's length relationship.
- 104. On information and belief, AGIS, Inc. transferred patents and patent applications, including the Patents-in-Suit, to AGIS Holdings without consideration. Lyft requested this information from AGIS, Inc. and AGIS Holdings via subpoenas issued by Lyft on February 4, 2022, but both AGIS, Inc. and AGIS Holdings have refused to provide this information.

105.

106. On information and belief, electronic inquiries submitted to AGIS Software's website are transmitted to AGIS, Inc. Lyft sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

107. 108.

109.

110.

111.

112.

- 113. On information and belief, AGIS, Inc. pays for office expenses at the business location in Jupiter, Florida. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, but AGIS, Inc. has refused to provide this information.
 - 114. AGIS Software and AGIS, Inc. share a business location in Marshall, Texas.
 - 115. AGIS Software, AGIS Holdings, and AGIS, Inc. use the same employees.
- 116. AGIS Software has no employees of its own, and employees of AGIS, Inc. perform work for AGIS Software.
- 117. On information and belief, AGIS Holdings has no employees of its own, and employees of AGIS, Inc. perform work on behalf of AGIS Holdings. Lyft requested this information from AGIS, Inc. and AGIS Holdings via subpoenas issued by Lyft on February 4, 2022, but both AGIS, Inc. and AGIS Holdings have refused to provide this information.
- 118. AGIS Software does not hold regular officer, board, or other company meetings, and does not record and maintain regular minutes from officer, board, or other company meetings.
- 119. On information and belief, AGIS, Inc. does not hold regular officer, board, or other corporate meetings and does not record and maintain regular minutes from officer, board, or other corporate meetings. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, but AGIS, Inc. has refused to provide this information.
- 120. AGIS Software, AGIS Holdings, and AGIS, Inc. have identical directors and/or officers.
- 121. AGIS, Inc., AGIS Software, and AGIS Holdings have overlapping officers. Malcolm K. Beyer Jr. is the CEO of AGIS Software, the CEO/Director/Chairman of AGIS Holdings, and the CEO/Director/Chairman of AGIS, Inc. Margaret Beyer is the Secretary of AGIS Software, the Secretary/Director of AGIS Holdings, and the Secretary/Director of AGIS, Inc. Ronald Wisneski is the CFO/Treasurer of AGIS Software, the CFO/Treasurer of AGIS Holdings, and the CFO/Treasurer of AGIS, Inc. Sandel Blackwell is the President of AGIS Software, the President/Director of AGIS Holdings, and the President of AGIS, Inc.
- 122. Because there is a unity of interest and ownership between AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. the separate personalities of the entities no longer

exist, and the corporate structure should be disregarded. *See, e.g. City & Cty. of San Francisco v. Purdue Pharma L.P.*, 491 F. Supp. 3d 610, 635 (N.D. Cal. 2020).

- 123. Failure to disregard the separate identities of AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. would result in fraud or injustice to Lyft's ability to seek a declaratory judgment of no infringement and recover any damages resulting from this lawsuit. *See, e.g., Reynolds v. Binance Holdings Ltd.*, 481 F. Supp. 3d 997, 1009 (N.D. Cal. 2020) ("To establish inequity in the absence of alter ego liability, a plaintiff must plead facts sufficient to demonstrate that conduct amounting to bad faith makes it inequitable for the corporate owner to hide behind the corporate form."); *Successor Agency to Former Emeryville Redevelopment Agency v. Swagelok Co.*, 364 F. Supp. 3d 1061, 1072 (N.D. Cal. 2019).
- 124. Because Malcom K. Beyer, Jr. and/or AGIS, Inc. controls the actions of the AGIS Software and AGIS Holdings such that AGIS Software and AGIS Holdings are mere alter egos of Malcom K. Beyer, Jr. and/or AGIS, Inc., the Court may exercise jurisdiction collectively over the AGIS entities.
 - iv. AGIS, Inc. has regular contacts with California involving the Patents-in-Suit
- 125. AGIS, Inc. has intentionally directed activities and communications to the State of California.
- 126. On information and belief, AGIS, Inc. maintains or maintained a bank account in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 127. AGIS, Inc. communicated with California companies, including Google, Inc. and Facebook, Inc., to pursue joint ventures, acquisition, or patent licensing agreements involving the Patents-in-Suit and/or related patents.

128. On information and belief, AGIS, Inc. formed partnerships with one or more California companies or individuals involving products that embody the Patents-in-Suit, including the LifeRing products. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- 129. On information and belief, AGIS, Inc. entered into non-disclosure agreements with California companies and organizations to pursue business opportunities involving products and/or services that embody the Patents-in-Suit, including the LifeRing products. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 130. AGIS, Inc. sent a letter to California-based company Life360 alleging infringement of and seeking a license to one or more of the Patents-in-Suit and/or related patents.
- 131. On information and belief, AGIS, Inc. marketed and continued to market its LifeRing product, which allegedly embodies the Patents-in-Suit, in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 132. On information and belief, AGIS, Inc. marketed LifeRing, which allegedly embodies the Patents-in-Suit, to California companies CornerTurn LLC, Integrity Applications and American Reliance, Inc. *See Life360, Inc. v. Advanced Ground Info. Sys., Inc.*, 2015 WL 5612008, at *3, Case No. 15-cv-00151-BLF (N.D. Cal. Sept. 21, 2015). Lyft requested this information from AGIS, Inc.

14

16

18

19

21

22

23 24

25 26

27 28 via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. On information and belief, AGIS, Inc. has also marketed LifeRing, which allegedly embodies the Patents-in-Suit to first responders, military agencies, and/or military contractors, including those in the State of California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- On information and belief, AGIS, Inc. provides or has provided downloads and 133. updates of its LifeRing product, which allegedly embodies the Patents-in-Suit, in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 134. On information and belief, AGIS, Inc. provided downloads of its LifeRing product, which allegedly embodies the Patents-in-Suit, to United States Navy personnel and contractors at the United States Navy, SPAWAR Systems Center Pacific, in San Diego, California. See Life360, Inc., 2015 WL 5612008, at *3. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information.
- 135. AGIS, Inc. allows companies and individuals, including California companies and individuals, a trial of the LifeRing product, which allegedly embodies the Patents-in-Suit.
- 136. On information and belief, AGIS Software has licensed the Patents-in-Suit and/or related patents to end users residing in California who downloaded the LifeRing product, which

allegedly embodies the Patents-in-Suit. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- 137. On information and belief, AGIS, Inc. demonstrates or has demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, in California or to individuals or entities residing in or operating out of California, respectively. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 138. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at a U.S. military exercise in San Diego, California. *See Life360, Inc.*, 2015 WL 5612008, at *3. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information.
- 139. On information and belief, Malcolm K. Beyer, Jr. discussed the LifeRing Product, which allegedly embodies the Patents-in-Suit, with California companies including ADI Technology and Maven Consulting. *See Life360, Inc.*, 2015 WL 5612008, at *3. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information.
- 140. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at the National Incident Management System (NIMS) Test,

to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- 141. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at a Coalition Warrior Interoperability Demonstration, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 142. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at Army Network Integration Evaluation, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 143. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at various U.S. Joint Commission Chief of Staff exercises, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide

13

11

15 16

17

18 19

20 21

22

23 24

25

26

27 28 the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at the Defense Intelligence Agency's Plugfest, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 145. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at various SOCOM TNT exercises, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 146. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at U.S. NATO Bold Quest, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- On information and belief, AGIS, Inc. demonstrated its LifeRing product, which 147. allegedly embodies the Patents-in-Suit, at Joint-Interagency Field Experimentation (JIFX)

7

10 11

12

13 14

15 16

17

18

19

20 21

22

23 24

25

26

27 28 exercises, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- 148. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at the Army Expeditionary Warrior Experiment, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 149. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, at Jolted Tactics, to individuals or entities residing in or operating out of California, respectively, and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.
- 150. On information and belief, AGIS, Inc. demonstrated its LifeRing product, which allegedly embodies the Patents-in-Suit, to various individuals affiliated with the U.S. Navy that reside in California and/or which occurred in California. Lyft requested this information from AGIS, Inc. via a subpoena issued by Lyft on February 4, 2022, in addition to requesting such information via an interrogatory (i.e., Jurisdictional Interrogatory No. 1). Both AGIS, Inc. and AGIS Software have refused to provide the requested information. Lyft also sought to confirm this

information at the deposition of AGIS Software, however, its designated witness, Thomas Meriam, was unable to confirm it.

- 151. As a result of the foregoing, AGIS Software either individually or as an alter ego of AGIS, Inc., AGIS Holdings, and/or Malcom K. Beyer, Jr. is subject to personal jurisdiction within this judicial district.
- 152. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 in that a substantial part of the acts giving rise to the claim occurred in this judicial district, and because AGIS Software is subject to personal jurisdiction in this district.

COUNT I

Declaratory Relief Regarding Non-Infringement of U.S. Patent No. 7,031,728

- 153. Lyft restates and incorporates by reference each of the allegations set forth in paragraphs 1-152 above, as if fully set forth herein.
- 154. On information and belief, AGIS Software is the owner of all right, title, and interest in the '728 patent, including the right to assert all causes of action arising under that patent and the right to any remedies for infringement of it. A copy of the '728 patent is attached hereto as **Exhibit A**.
- 155. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality regarding whether Lyft infringes the claims of the '728 Patent, including Lyft facing an imminent threat of restraint on free use of its non-infringing products, such that a declaratory judgment of non-infringement is warranted.
- 156. Lyft has not infringed, directly or indirectly the claims of the '728 Patent by or through making, using, offering for sale, selling within the United States and/or importing of its products and/or services.
- 157. The '728 Patent purports to concern a system for monitoring the location and status of a plurality users on the display of the users' cellular phone or PDA." Exhibit A at Abstract.
 - 158. Claim 7 of the '728 Patent provides as follows:
 - 7. A method of establishing a cellular phone communication network for designated participants, each having a similarly equipped cellular phone that includes voice

communication, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system and a touch screen display comprising the steps of:

- a) generating one or more symbols on the touch display screen, each representing a different participant that has a cellular phone that includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display;
- b) providing and storing in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which relates to a different symbol of each of the participants in the communication network;
- c) providing initiating cellular phone calling software in each cellular phone that is activated by touching a symbol on the touch display that automatically initiates a cellular phone call using the stored cellular phone number to the participant represented by the symbol; and
- d) generating a geographical location chart on said display screen to show the geographical location of each of the symbols representing the participants in the communication network by latitude and longitude.
- 159. Lyft does not infringe claim 7 of the '728 Patent at least because the activities and/or products of Lyft accused of infringing the '728 Patent, including at least Lyft's Accused Products, do not infringe claim 7 literally or under the doctrine of equivalents.
- 160. For example, without limitation, Lyft does not "provid[e] and stor[e] in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which relates to a different symbol of each of the participants in the communication network" as required by claim 7 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not store numbers on user devices. Consequently, Lyft does not "provid[e] and stor[e] in each of the participant cellular phones one or more cellular phone telephone numbers" as required by claim 7 of the '728 Patent. At least for these reasons, Lyft does not infringe claim 7 of the '728 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 7 and the claims depending from it are not infringed for additional reasons.
- 161. As another example, without limitation, Lyft does not "provid[e] initiating cellular phone calling software in each cellular phone that is activated by touching a symbol on the touch display that automatically initiates a cellular phone call using the stored cellular phone number to the participant represented by the symbol" as required by claim 7 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not use symbols representing participants to

place calls. Consequently, Lyft does not "provid[e] initiating cellular phone calling software in each cellular phone that is activated by touching a symbol on the touch display that automatically initiates a cellular phone call using the stored cellular phone number to the participant represented by the symbol" as required by claim 7 of the '728 Patent. At least for these reasons, Lyft does not infringe claim 7 of the '728 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 7 and the claims depending from it are not infringed for additional reasons.

- 162. For at least the foregoing reasons, Lyft does not infringe any claim of the '728 patent, directly or indirectly, contributorily or otherwise through its or its user's activities in conjunction with the Lyft rider or Lyft driver applications, or any other Lyft product.
- 163. As set forth above, an actual and justiciable controversy exists between Lyft and AGIS Software as to Lyft's non-infringement of the '728 patent.
- 164. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, Lyft requests that this Court enter a judgment that Lyft does not infringe, under any theory of infringement, any valid claim of the '728 patent.

COUNT II

Declaratory Relief Regarding Non-Infringement of U.S. Patent No. 7,630,724

- 165. Lyft restates and incorporates by reference each of the allegations set forth in paragraphs 1-164 above, as if fully set forth herein.
- 166. AGIS Software alleges that it is the owner of all right, title, and interest in the '724 patent, including the right to assert all causes of action arising under that patent and the right to any remedies for infringement of it. A copy of the '724 patent is attached hereto as **Exhibit B**.
- 167. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality regarding whether Lyft infringes the claims of the '724 Patent, including Lyft facing an imminent threat of restraint on free use of its non-infringing products, such that a declaratory judgment of non-infringement is warranted.

- 168. Lyft has not infringed, directly or indirectly the claims of the '724 Patent by or through making, using, offering for sale, selling within the United States and/or its importing of it products and/or services.
- 169. The '724 Patent purports to concern monitoring other user's location and status, and to initiate cellular phone calls between users by selecting a symbol on a touch display. Exhibit B at Abstract.
 - 170. Claim 16 of the '724 Patent provides as follows:
 - 16. A method of providing a cellular phone communication network for designated participating users, each having a similarly equipped PDA cellular phone that includes a CPU, a GPS navigational system and a touch screen display comprising:

selecting an icon that establishes rapid voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch screen;

transmitting high speed internet rapid transmission of operator selected text messages, photographs, voice recordings and video to other cellular phone users using the touch screen;

accessing a server for establishing high speed internet communications between said cellular phone network users and said server; and

generating at the server networks enabling anonymous voice and data communications so that neither the originator of the phone call or data transmission nor the receiver of the phone call or data transmission need to know the other's phone number, name or other identifier other than a symbol location on a map.

- 171. Lyft does not infringe claim 16 of the '724 Patent at least because the activities and/or products of Lyft accused of infringing the '724 Patent, including at least Lyft's Accused Products, do not infringe claim 16 literally or under the doctrine of equivalents.
- 172. For, without limitation, Lyft does not "establish[] rapid voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch screen" as required by claim 16 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not use symbols representing participants to place calls. Consequently, Lyft does not "establish[] rapid voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch screen" as required by claim 16 of the '724 Patent. At least for these reasons, Lyft

4

5 6

7 8

10

9

11 12

13 14

15

16

17 18

19

20

21

22

23 24

25 26

27

28

does not infringe claim 16 of the '724 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 16 and the claims depending from it are not infringed for additional reasons.

- 173. As another example, without limitation, Lyft does not "generate[e] at the server networks enabling anonymous voice and data communications so that neither the originator of the phone call or data transmission nor the receiver of the phone call or data transmission need to know the other's phone number, name or other identifier other than a symbol location on a map" as required by claim 16 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does provide additional information such as a phone numbers, name, and/or other identifiers other than a symbol on a map. At least for these reasons, Lyft does not infringe claim 16 of the '724 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 16 and the claims depending from it are not infringed for additional reasons.
- 174. For at least the foregoing reasons, Lyft does not infringe any claim of the '724 patent, directly or indirectly, contributorily or otherwise through its or its user's activities in conjunction with the Lyft rider or Lyft driver applications, or any other Lyft product.
- As set forth above, an actual and justiciable controversy exists between Lyft and AGIS Software as to Lyft's non-infringement of the '724 patent.
- Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 et seq., Lyft requests that this Court enter a judgment that Lyft does not infringe, under any theory of infringement, any valid claim of the '724 patent.

COUNT III

Declaratory Relief Regarding Non-Infringement of U.S. Patent No. 8,213,970

- 177. Lyft restates and incorporates by reference each of the allegations set forth in paragraphs 1-176 above, as if fully set forth herein.
- 178. On information and belief, AGIS Software is the owner of all right, title, and interest in the '970 patent, including the right to assert all causes of action arising under that patent and the right to any remedies for infringement of it. A copy of the '970 patent is attached hereto as **Exhibit** C.

- 179. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality regarding whether Lyft infringes the claims of the '970 Patent, including Lyft facing an imminent threat of restraint on free use of its non-infringing products, such that a declaratory judgment of non-infringement is warranted.
- 180. Lyft has not infringed, directly or indirectly the claims of the '970 Patent by or through making, using, offering for sale, selling within the United States and/or its importing of it products and/or services.
- 181. The '970 Patent purports to concern "enabl[ing] a participant to force an automatic acknowledgement and a manual response to a text or voice message from other participants within the same network." Exhibit C at Abstract. The Patent describes a sender to select an option to send a forced message, which forced message requires a response from a recipient of the message. In response to receiving the forced message, the recipient must select a response on their device before they can exit from the message. *Id.* at Figures 3A and 4.
 - 182. Claim 2 of the '970 Patent provides as follows:
 - 2. A communication system for transmitting, receiving, confirming receipt, and responding to an electronic message, comprising:

a predetermined network of participants, wherein each participant has a similarly equipped PDA/cell phone that includes a CPU and a touch screen display a CPU and memory;

a data transmission means that facilitates the transmission of electronic files between said PDA/cell phones in different locations;

a sender PDA/cell phone and at least one recipient PDA/cell phone for each electronic message;

a forced message alert software application program including a list of required possible responses to be selected by a participant recipient of a forced message response loaded on each participating PDA/cell phone;

means for attaching a forced message alert software packet to a voice or text message creating a forced message alert that is transmitted by said sender PDA/cell phone to the recipient PDA/cell phone, said forced message alert software packet containing a list of possible required responses and requiring the forced message alert software on said recipient PDA/cell phone to transmit an automatic acknowledgment to the sender PDA/cell phone as soon as said forced message alert is received by the recipient PDA/cell phone;

means for requiring a required manual response from the response list by the

recipient in order to clear recipient's response list from recipient's cell phone display;

means for receiving and displaying a listing of which recipient PDA/cell phones have automatically acknowledged the forced message alert and which recipient PDA/cell phones have not automatically acknowledged the forced message alert;

means for periodically resending said forced message alert to said recipient PDA/cell phones that have not automatically acknowledged the forced message alert; and

means for receiving and displaying a listing of which recipient PDA/cell phones have transmitted a manual response to said forced message alert and details the response from each recipient PDA/cell phone that responded; and

means for displaying a geographical map with georeferenced entities on the display of the sender PDA/cell phone; means for obtaining location and status data associated with the recipient PDA/cell phone; and means for presenting a recipient symbol on the geographical map corresponding to a correct geographical location of the recipient PDA/cell phone, wherein the forced message alert software application program on the recipient PDA/cell phone includes:

means for transmitting the acknowledgment of receipt to said sender PDA/cell phone immediately upon receiving a forced message alert from the sender PDA/cell phone;

means for controlling of the recipient PDA/cell phone upon transmitting said automatic acknowledgment and causing, in cases where the force message alert is a text message, the text message and a response list to be shown on the display of the recipient PDA/cell phone or causes, in cases where the forced message alert is a voice message, the voice message being periodically repeated by the speakers of the recipient PDA/cell phone while said response list is shown on the display;

means for allowing a manual response to be manually selected from the response list or manually recorded and transmitting said manual response to the sender PDA/cell phone; and

means for clearing the text message and a response list from the display of the recipient PDA/cell phone or stopping the repeating voice message and clearing the response list from the display of the recipient PDA/cell phone once the manual response is transmitted.

- 183. Lyft does not infringe claim 2 of the '970 Patent at least because the activities and/or products of Lyft accused of infringing the '970 Patent, including at least Lyft's Accused Products, do not infringe claim 1 literally or under the doctrine of equivalents.
- 184. For example, without limitation, Lyft does not require a "forced message alert" nor "[require] a required manual response from the response list by the recipient in order to clear recipient's response list from recipient's cell phone display" as required by claim 2 and as alleged

by AGIS Software. The '970 Patent defines "the response list" as "the response list from which the message receive must select." *Id.* at 7:55-56. Contrary to AGIS Software's allegations, Lyft does not requires manual responses to clear a recipient's response list from the recipient's cell phone display. Consequently, Lyft does not require a "forced message alert" nor "[require] a required manual response from the response list by the recipient in order to clear recipient's response list from recipient's cell phone display" as required by claim 2 of the '970 Patent. At least for these reasons, Lyft does not infringe claim 2 of the '970 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 2 and the claims depending from it are not infringed for additional reasons.

- 185. For example, without limitation, Lyft does not require a "means for requiring a required manual response from the response list by the recipient in order to clear recipient's response list from recipient's cell phone display" as required by claim 2 and as alleged by AGIS Software. The '970 Patent states that a display "can only be cleared by manually transmitting a response." *Id.* at Abstract. Contrary to AGIS Software's allegations, Lyft does not requires manual responses to clear a display. Consequently, Lyft does not require a "forced message alert" nor "[require] a required manual response from the response list by the recipient in order to clear recipient's response list from recipient's cell phone display" as required by claim 2 of the '970 Patent. At least for these reasons, Lyft does not infringe claim 2 of the '970 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 2 and the claims depending from it are not infringed for additional reasons.
- 186. For at least the foregoing reasons, Lyft does not infringe any claim of the '970 patent, directly or indirectly, contributorily or otherwise through its or its user's activities in conjunction with the Lyft rider or Lyft driver applications, or any other Lyft product.
- 187. As set forth above, an actual and justiciable controversy exists between Lyft and AGIS Software as to Lyft's non-infringement of the '970 patent.
- 188. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, Lyft requests that this Court enter a judgment that Lyft does not infringe, under any theory of infringement, any valid claim of the '970 patent.

COUNT IV 1 2 Declaratory Relief Regarding Non-Infringement of U.S. Patent No. 10,299,100 3 Lyft restates and incorporates by reference each of the allegations set forth in 4 paragraphs 1-188 above, as if fully set forth herein. 5 AGIS Software alleges that it is the owner of all right, title, and interest in the '100 190. patent, including the right to assert all causes of action arising under that patent and the right to any 6 7 remedies for infringement of it. A copy of the '100 patent is attached hereto as **Exhibit D**. 8 As a result of the acts described in the preceding paragraphs, there exists a 9 controversy of sufficient immediacy and reality regarding whether Lyft infringes the claims of the '100 Patent, including Lyft facing an imminent threat of restraint on free use of its non-infringing 10 11 products, such that a declaratory judgment of non-infringement is warranted. 12 192. Lyft has not infringed, directly or indirectly the claims of the '100 Patent by or through making, using, offering for sale, selling within the United States and/or its importing of it 13 14 products and/or services. 15 The '100 Patent purports to concern "set[ting] up ad hoc networks in emergency situations." Exhibit D at Abstract. The Patent further describes how users may join the ad hoc 16 17 networks. Id. at Figures 2-4. Claim 1 of the '100 Patent provides as follows: 194. 18 19 1. A method performed by a mobile device having a display and one or more processors, 20 the method comprising: 21 executing operations on the one or more processors of the mobile device, the operations comprising: 22 associating the mobile device with an identifier, wherein the identifier 23 corresponds to a network participant; 24 determining a device location corresponding to a geographical location of the mobile device; 25 receiving, from a server, mapping data including a map and coordinate 26 translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations; 27 receiving, from a server, location data indicating vehicle locations of one or 28 more vehicles:

marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to the respective vehicle locations of the one or more vehicles, wherein marking the map comprises:

determining, based at least in part on the vehicle locations and the coordinate translation data, positions on the map corresponding to the vehicle locations,

displaying the map on the display of the mobile device, and

placing the vehicle symbols on the map at the determined positions corresponding to the vehicle locations;

responsive to user selection of a portion of the display corresponding to a position on the map, identifying a selected facility symbol based on the selected position, comprising: initiating a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position and, based on a result of the search, identifying the selected facility symbol as the symbol located nearest to the selected position;

responsive to user input, transmitting first information to a first vehicle of the one or more vehicles; and

receiving second information corresponding to the first vehicle and displaying the received second information on the display of the mobile device,

wherein the mobile device does not have access to a phone number associated with a computing device corresponding to the first vehicle, an Internet Protocol (IP) address associated with the computing device corresponding to the first vehicle, and an e-mail address associated with the computing device corresponding to the first vehicle.

- 195. Lyft does not infringe claim 1 of the '100 Patent or any claim dependent thereon at least because the activities and/or products of Lyft accused of infringing the '100 Patent, including at least Lyft's Accused Products, do not infringe claim 1 literally or under the doctrine of equivalents.
- 196. For example, without limitation, Lyft does not "receiv[e], from a server, mapping data including a map and coordinate translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations" as required by claim 1 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not have a use "coordinate translation data" to correlate "coordinates of positions on the map with corresponding coordinates of geographical locations" as required by the '100 Patent. Consequently, Lyft does not prepare a

8

10

9

11 12

13

14

15 16

17

18

19

20 21

22

23

24

26

25

27 28

"coordinate translation data" as required by claim 1 of the '100 Patent. At least for these reasons, Lyft does not infringe claim 1 of the '100 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 21 and the claims depending from it are not infringed for additional reasons.

- 197. As another example, without limitation, Lyft does not "initiat[e] a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position" as required by claim 1 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not have a use "search a set of symbols" as required by the '100 Patent, as Lyft searches addresses and locations and does not search through symbols themselves. Consequently, Lyft does not "search a set of symbols" as required by claim 1 of the '100 Patent. At least for these reasons, Lyft does not infringe claim 1 of the '100 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 1 and the claims depending from it are not infringed for additional reasons.
- 198. For at least the foregoing reasons, Lyft does not infringe any claim of the '100 patent, directly or indirectly, contributorily or otherwise through its or its user's activities in conjunction with the Lyft rider or Lyft driver applications, or any other Lyft product.
- As set forth above, an actual and justiciable controversy exists between Lyft and AGIS Software as to Lyft's non-infringement of the '100 patent.
- 200. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 et seq., Lyft requests that this Court enter a judgment that Lyft does not infringe, under any theory of infringement, any valid claim of the '100 patent.

COUNT V

Declaratory Relief Regarding Non-Infringement of U.S. Patent No. 10,341,838

- 201. Lyft restates and incorporates by reference each of the allegations set forth in paragraphs 1-200 above, as if fully set forth herein.
- 202. AGIS Software alleges that it is the owner of all right, title, and interest in the '838 patent, including the right to assert all causes of action arising under that patent and the right to any remedies for infringement of it. A copy of the '838 patent is attached hereto as **Exhibit E**.

- 203. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality regarding whether Lyft infringes the claims of the '838 Patent, including Lyft facing an imminent threat of restraint on free use of its non-infringing products, such that a declaratory judgment of non-infringement is warranted.
- 204. Lyft has not infringed, directly or indirectly the claims of the '838 Patent by or through making, using, offering for sale, selling within the United States and/or its importing of it products and/or services.
- 205. The '838 Patent purports to concern "system setting up ad hoc networks." Exhibit E at Abstract. The Patent describes an ad hoc network for users to coordinate and communicate with one another." *Id.* at Figures 2-4.
 - 206. Claim 1 of the '838 Patent provides as follows:
 - 1. A method performed by one or more servers each having one or more processors, the method comprising:

executing operations on the one or more processors, the operations comprising:

obtaining first data provided by a first mobile device corresponding to a vehicle, the first data including a first identifier;

permitting the first mobile device corresponding to the vehicle to join a communication network, the permitting based on a determination regarding the first data;

obtaining second data provided by a second mobile device corresponding to a participant, the second data including a second identifier associated with the participant;

allowing the second mobile device corresponding to the participant to join the communication network, the allowing based on a determination regarding the second data;

receiving vehicle location data provided by the first mobile device corresponding to the vehicle, wherein the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device;

receiving participant location data provided by the second mobile device corresponding to the participant, wherein the participant location data are associated with the second identifier and indicate coordinates of a geographical location of the second mobile device;

sending participant data to the second mobile device corresponding to the participant, wherein the participant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1)

determine coordinates of a position on the participant map corresponding to the coordinates of the geographical location of the second mobile device, (2) display the participant map, and (3) place a first symbol on the participant map at the determined coordinates of the position on the participant map corresponding to the coordinates of the geographical location of the second mobile device;

sending vehicle data to the first mobile device corresponding to the vehicle, wherein the vehicle data comprise the participant location data, wherein the first mobile device corresponding to the vehicle is configured to (1) determine coordinates of a position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device, (2) display the vehicle map, and (3) place a second symbol on the vehicle map at the determined coordinates of the position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device;

receiving participant selection data provided by the second mobile device corresponding to the participant, the participant selection data corresponding to user input provided via a display of the second mobile device;

based on the participant selection data, performing one or more acts selected from the group consisting of: sending updated vehicle data to the first mobile device corresponding to the vehicle, sending updated participant data to the second mobile device corresponding to the participant, and sending a message to the first mobile device corresponding to the vehicle;

receiving entity-of-interest data transmitted by the second mobile device, the entity-of-interest data comprising coordinates of a geographical location of a new entity of interest, wherein the second mobile device is configured to (1) identify participant interaction with a display of the second mobile device, the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2) display an entity symbol representing the new entity of interest at the selected position on the participant map, (3) determine coordinates of a geographical location of the new entity of interest based on coordinates of the selected position on the participant map, and (4) transmit the entity-of-interest data; and

sending the entity-of-interest data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to place the entity symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding to the geographical location of the new entity of interest.

- 207. Lyft does not infringe claim 1 of the '838 Patent or any claim dependent thereon at least because the activities and/or products of Lyft accused of infringing the '838 Patent, including at least Lyft's Accused Products, do not infringe claim 1 literally or under the doctrine of equivalents.
- 208. For example, without limitation, Lyft sends additional information beyond the limited options in the Markush group "based on the participant selection data, performing one or

more acts selected from the group consisting of: sending updated vehicle data to the first mobile device corresponding to the vehicle, sending updated participant data to the second mobile device corresponding to the participant, and sending a message to the first mobile device corresponding to the vehicle" as required by claim 1 and as alleged by AGIS Software. At least for these reasons, Lyft does not infringe claim 1 of the '838 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 1 and the claims depending from it are not infringed for additional reasons.

- 209. As another example, without limitation, Lyft does not "receiv[e] entity-of-interest data transmitted by the second mobile device, the entity-of-interest data comprising coordinates of a geographical location of a new entity of interest" as required by claim 1 and as alleged by AGIS Software. Contrary to AGIS Software's allegations, Lyft does not have a use "receive new entities-of-interest data as required by the '100 Patent, as Lyft relies on existing entities-of-interest. Consequently, Lyft does not "receive entity-of-interest data ... comprising coordinates of a geographical location of a new entity of interest" as required by claim 1 of the '100 Patent. At least for these reasons, Lyft does not infringe claim 1 of the '838 Patent. The allegations in this paragraph are exemplary and do not preclude Lyft from contending that claim 1 and the claims depending from it are not infringed for additional reasons.
- 210. For at least the foregoing reasons, Lyft does not infringe any claim of the '838 patent, directly or indirectly, contributorily or otherwise through its or its user's activities in conjunction with the Lyft rider or Lyft driver applications, or any other Lyft product.
- 211. As set forth above, an actual and justiciable controversy exists between Lyft and AGIS Software as to Lyft's non-infringement of the '838 patent.
- 212. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, Lyft requests that this Court enter a judgment that Lyft does not infringe, under any theory of infringement, any valid claim of the '838 patent.

COUNT VI

Breach of ContractOverview of Apple Agreement

- 213. Lyft restates and incorporates by reference each of the allegations set forth in paragraphs 1-212 above, as if fully set forth herein.
- 214. On September 18, 2017, AGIS Software Development LLC ("AGIS Software") sued Apple, Inc. ("Apple") for patent infringement in the Eastern District of Texas in consolidated lead case no. 2:17-cv-516 ("Apple Litigation").
- 215. On information and belief, in March 2019, one or more of the AGIS Entities entered into a settlement and patent license agreement with Apple (hereinafter the "Apple Agreement"), which resolved the Apple Litigation. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 216. On information and belief, one or more of the AGIS Entities are parties to the Apple Agreement. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 217. On information and belief, Apple is a party to the Apple Agreement. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 218. On information and belief, settlement agreements executed by Apple to resolve patent litigation matters may include covenants not to assert infringement based on covered Apple products. *See, e.g., Perfect Co. v. Adaptics Ltd.*, 374 F. Supp. 3d 1039 (W.D. Wash. 2019).
- 219. On information and belief, the Apple Agreement includes a covenant not to sue for infringement of the Patents-In-Suit based on the alleged infringement of an Apple product. *See id.*.
- 220. On information and belief, the Apple Agreement has not been terminated. On information and belief, this information could have been confirmed had AGIS Software complied

12

16

17

22

24

25

26

27

28

with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

- 221. On information and belief, as of March 2019, the Apple Agreement was an enforceable contract that was binding upon AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcolm K. Beyer Jr. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 222. On information and belief, the Apple Agreement remains an enforceable contract that is currently binding upon AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcolm K. Beyer Jr. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- On information and belief, the Apple Agreement has not expired. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 224. On information and belief, any and all conditions precedent necessary to enforce the terms of the Apple Agreement have been satisfied.
- 225. On information and belief, Apple has fully performed any and all obligations required of it under the Apple Agreement.

The Asserted Patents in in the Eastern District of Texas litigation

226. On information and belief, the Apple Agreement covers the Patents-in-Suit, which are related to patents asserted against Apple by AGIS Software. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

The Apple Agreement Covers the Products Accused in the Eastern District of Texas litigation

227. On information and belief, the Apple Agreement covers Apple iOS products which AGIS Software accused of infringing the Patents-in-Suit or related patents.

The Accused Products in the Eastern District of Texas litigation are Licensed Products

- 228. Lyft's application(s) may be installed on iPhones or other iOS devices.
- 229. On information and belief, Lyft's application(s) installed on an iPhone or other iOS device would be licensed by the Apple Agreement. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.
- 230. In its infringement contentions served May 19, 2021 as part of its Eastern District of Texas litigation against Lyft alleging patent infringement, attached as Exhibit F, AGIS Software accused the Lyft application installed on all iOS mobile devices.
- 231. In its infringement contentions served February 25, 2022 as part of this lawsuit, AGIS Software accused the Lyft application installed on iOS mobile devices and has not formally withdrawn its allegations against iOS devices.
- 232. AGIS Software included a picture of the Lyft application running on an iPhone in its E.D. Tex. complaint and its infringement contentions in this case. *See, e.g., AGIS Software Development LLC v. Lyft, Inc.*, Civil Action No. 2:21-cv-00024-JRG (E.D. Tex.), Dkt. 1 at page 14; Exhibit G at A-29.

AGIS Software Breached the Covenant Not to Sue Provision of the Apple Agreement

233. On January 29, 2021, AGIS Software sued Lyft for patent infringement of the '970 Patent, '724 Patent, '728 Patent, '838 Patent, and the '100 Patent, alleging infringement based on Lyft's application(s) installed on iOS devices.

2	234.	On information and belief, the Ap	ple Agreement was executed prior to January 29,		
2021. C	On info	rmation and belief, this information	on could have been confirmed had AGIS Software		
complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses,					
transferr	ring an	interest in any patent-in-suit."	But AGIS Software has not produced all such		
agreements despite a specific request by Lyft that AGIS Software do so.					

235. On information and belief, AGIS Software breached the covenant not to sue provision of the Apple Agreement by suing Lyft in the Eastern District of Texas litigation for infringement of five AGIS Software Patents (i.e., the licensed '970, '724, '728, '838, and '100 Patents) based on Lyft's application(s) installed on iOS devices. On information and belief, this information could have been confirmed had AGIS Software complied with its obligations under Patent L.R. 3-2 to produce "all agreements, including licenses, transferring an interest in any patent-in-suit." But AGIS Software has not produced all such agreements despite a specific request by Lyft that AGIS Software do so.

AGIS is Causing Injury by Wrongfully Asserting the '970, '724, '728, '838, and '100 Patents

Against Lyft

- 236. On information and belief, AGIS Software was aware before filing the Eastern District of Texas suit and before serving infringement contentions in this case that its allegations rely on functionality and features provided by Apple iPhones and iOS devices.
- 237. AGIS Software, AGIS, Inc., AGIS Holdings, and/or Malcolm K. Beyer Jr.'s breach of the covenant not to sue has caused Lyft to incur damages, including but not limited to attorneys' fees and other expenses in this and the E.D. Tex. case.

PRAYER FOR RELIEF

WHEREFORE, Lyft respectfully prays for judgment in favor of Lyft and against AGIS Software, as follows:

- 1. For a judicial determination and declaration that Lyft has not infringed and is not infringing, directly or indirectly, any claim of the Patents-in-Suit;
- 2. For injunctive relief against AGIS Software, and all persons acting on its behalf or in concert with it, restraining them from further prosecuting or instituting any action against Lyft or

Exhibit A

US007031728B2

(12) United States Patent Beyer, Jr.

(10) Patent No.: US 7,031,728 B2 (45) Date of Patent: Apr. 18, 2006

(54) CELLULAR PHONE/PDA COMMUNICATION SYSTEM

(76) Inventor: Malcolm K. Beyer, Jr., 92 Lighthouse

Dr., Jupiter Inlet Colony, FL (US)

33469-3504

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/711,490

(22) Filed: Sep. 21, 2004

(65) Prior Publication Data

US 2006/0063539 A1 Mar. 23, 2006

(51) **Int. Cl.** *H04Q 7/20*

7/20 (2006.01)

(52) **U.S. Cl.** **455/456.3**; 455/457; 455/420

> 455/518, 519, 516, 564, 458, 463 See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,555,286 A * 9/1996 Tendler 455/404.2

6,204,844		3/2001	Fumarolo et al 715/736
6,542,475	B1 *	4/2003	Bala et al 370/271
6,775,560	B1*	8/2004	King et al 455/566
6,868,337	B1 *	3/2005	Muramatsu 701/211
2001/0044321	A1*	11/2001	Ausems et al 455/556
2003/0139150	A1	7/2003	Rodrigues et al.
2004/0192331	A1*	9/2004	Gorday et al 455/456.1
2004/0266456	A1*	12/2004	Bostrom et al 455/456.3
2005/0130634	A1*	6/2005	Godfrey 455/414.1

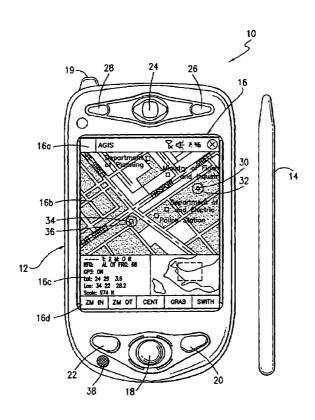
* cited by examiner

Primary Examiner—Aung Moe (74) Attorney, Agent, or Firm—Malin, Haley & DiMaggio, P.A.

(57) ABSTRACT

A cellular PDA communication system for allowing a plurality of cellular phone users to monitor each others' location and status, to initiate cellular phone calls by touching a symbol on the display screen with a stylus or finger which can also include conferencing calling. The system also provides for remote activation of a cellular phone by an initiator causing the remote cellular phone to annunciate audio announcements, to call another phone number, to increase the volume of the speaker, to vibrate or to display images or videos. All this is accomplished with a conventional cellular phone PDA that includes GPS navigation with an enhanced improved software program.

15 Claims, 3 Drawing Sheets



U.S. Patent

Apr. 18, 2006

Sheet 1 of 3

US 7,031,728 B2

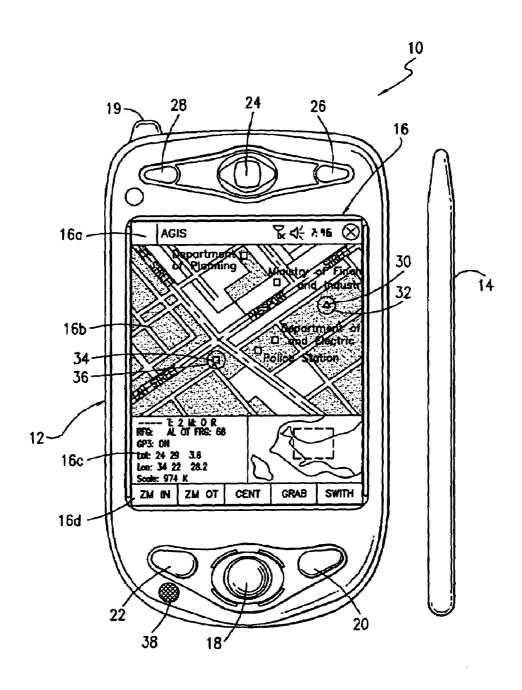


FIG. 1

U.S. Patent

Apr. 18, 2006

Sheet 2 of 3

US 7,031,728 B2

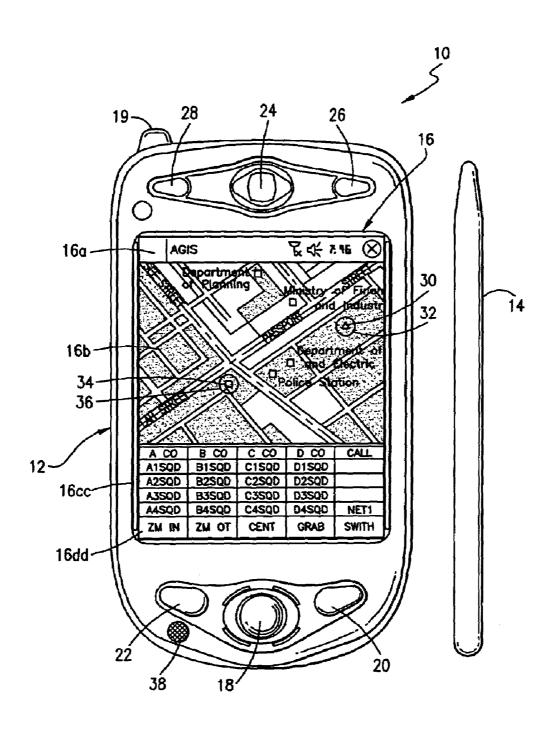


FIG. 2

U.S. Patent Apr. 18, 2006 Sheet 3 of 3

US 7,031,728 B2

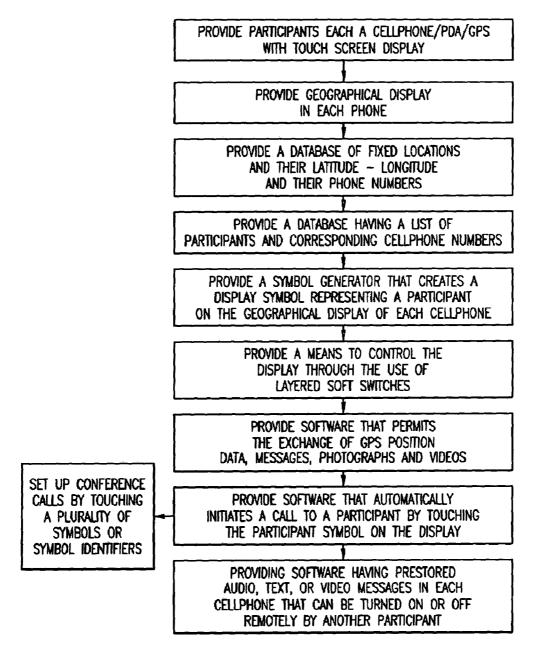


FIG. 3

1

CELLULAR PHONE/PDA COMMUNICATION SYSTEM

FIELD OF THE INVENTION

This invention relates generally to an integrated communications system using a plurality of cellular PDA/GPS phones for the management of a group of people through the use of a communications net and, specifically, provide each user with a cellular phone that has features that permit all the users to know each other's locations and status, to rapidly call and communicate data among the users by touching display screen symbols and to enable the users to easily access data concerning other users and other database information.

DESCRIPTION OF RELATED ART

The purpose of a communications system is to transmit information bearing signals from a source, located at one 20 point, to a user destination, located at another point some distance away. A communications system is generally comprised of three basic elements: transmitter, information channel and receiver. One form of communication in recent years is cellular phone telephony. A network of communi- 25 cation cells set up around an area such as the United States allows multiple users to talk to each other, either on individual calls or on group calls. Some cellular phone services enable a cellular phone to engage in conference calls with a small number of users. Furthermore, cellular conference 30 calls can be established through 800 number services. Cellular telephony also now includes systems that include Global Positioning System (GPS) navigation that utilizes satellite navigation. These devices thus unite cellular phone cellular technology with navigation information and com- 35 puter information transmission and receipt of data.

Digital SMS (Smart Message Service) and TCP/IP messages can be transmitted using cellular technology such as the various versions of GSM and CDMA or via a WiFi local area network. One implementation of these GPS location 40 reporting cellular systems is for the data to go to a central site where the information is displayed for a person to monitor the locations of the units that have the combined GPS cellular phone. Another implementation permits the cellular phone users to also view the location of other GPS 45 equipped units. A drawback of the current implementation is that these systems are either all on or all off. There is no way to selectively activate participants or to stop the participants from participating in the network Another drawback of the use of the current combined cellular phone PDA technology 50 is that when using the PDA to display a map (that also may depict georeferenced businesses, homes and other facilities locations and phone numbers), and the operator wants to place a call, the cellular phone/PDA operator is required to obtain the phone number by touching the display screen at 55 the correct location of that entity on the map to obtain the phone number, then the operator has to memorize the phone number, then go to a different display to enter the phone number, to make the call and then, if desired, go back to the map display. Needless to say, this is a cumbersome process. 60 Sending a text message to a location, business, home or facility that appears on a PDA map display to another cellular phone can also be a cumbersome process as the PDA operator has to find the phone number on the map display, memorize the phone number, then go to a different display 65 to enter a text message, enter the text message, send the text message and then shift back to the map display program.

2

Furthermore, for a phone to send data concerning a new entity of interest (car, person, tank, accident, or other entity) the operator must type in the information and the latitude and longitude of the entity.

In spite of the rapid advance in cellular phone technology, it would also be desirable to actuate a remote cellular phone to annunciate an audio message to alert the remote user that there is an emergency (or for another reason) and that the calling cellular phone should be called immediately. Furthermore, it would be desirable to cause the remote phone to display a text message, photograph, video clip or video transmission, to announce the caller's name and to be able to control a remote phone and cause the remote phone to call another phone number (as an example, to automatically establish an 800 number conference call), to vibrate, or increase the loudness of an announcement without any action by the remote phone operator.

The present software invention overcomes many of these problems shown in the prior art by providing a cellular phone/PDA/GPS user: a) the ability to selectively poll each of the other PDA/GPS phones to start reporting their positions and status information directly to all or selected users equipped with cellular phone/PDA communication/GPS system in the communications net so that each of the systems that the data is transmitted to is provided a display of the location, status and other information of the other users; b) the ability to exchange other entities of interest information and to assign these entities a category (car, person, tank, accident, or other entity) by touching the display screen at their locations on the map, and selecting the appropriate category switch; c) the ability to make rapid voice and data call initiation to locations, businesses, homes and facilities whose phone number is available in a georeferenced database including the cellular phone/PDA/GPS systems in a communications net by touching the display screen at the appropriate location on the PDA display and selecting a call switch; d) the ability to make rapid voice and data conference call initiation to locations, businesses, homes and facilities whose phone number is available in a georeferenced database including the cellular phone/PDA/ GPS systems in a communications net by touching the display screen at the appropriate locations on the PDA display and selecting a conference call switch; e) the ability to remotely control from one cellular phone/PDA/GPS any of the other cellular phone/PDA/GPS systems phones including the ability to control remote cellular phones to make verbal prerecorded announcements, place return calls. place calls to another phone number, vibrate, execute text to speech software, change sound intensity and process and display information by touching the display screen at their location on the PDA display and selecting the appropriate switch; and f) the ability to layer a sufficient number of switches or buttons on the PDA display to perform the above functions without overlaying the map.

U.S. Patent Application No. 2003/0139150 published Jul. 24, 2003 shows a portable navigation and communication system. In one embodiment, the system combines within a single enclosure a GPS satellite positioning unit, mobile telephony using cellular phone technology and personal computing capable of wired or wireless internet or intranet access using a standard operating system. The purpose of this invention is to provide portable navigation for an individual. However, to operate the device, one still needs to utilize a keypad with the telephone functions. U.S. Patent Application No. 2003/0139150 described a wireless communication operating the PDA in a conventional manner. There is no provision for displaying the location of other

3

similarly equipped systems. There is no provision to cause other similarly equipped cellular phone PDA users to transmit their location. There is no provision for entering other entities of interest by touching the display screen at their locations on a map. There is no provision for making a 5 telephone call by touching the display screen at a net participant's symbol to initiate automatically the telephone call to that user or by touching multiple symbols to make conference calls. There is no provision for sending text messages, photographs or videos by touching the net par- 10 ticipant(s)' symbol(s) on the display screen to automatically send text messages, photographs or videos to that participant or participants. There is no description or disclosure of a procedure to cause digital messages to be sent to a remote cellular phone that would cause the cellular phone to make 15 verbal announcements, increase sound intensity, vibrate or to call back or to call another phone number. There is no description of the uses of layered soft switches which confine the switches to a particular vicinity of the PDA's display screen.

SUMMARY OF THE INVENTION

A method and system employing cellular telephone communications to provide the location information to a group 25 of geographically dispersed people, and to enable the rapid transmission of data concerning entities of interest to the members of the group and to coordinate the activities of the group through data and voice communications. Each of the cellular telephones includes a visual display with a touch 30 screen, a global positioning system (GPS) receiver and navigation display, a CPU, memory, power supply, battery, microphone, speaker and commercially available software. To this is added: a) communications data and voice exchange software, b) a map database and a database of 35 geographically referenced fixed locations including military bases, homes, businesses, government facilities, street locations and the like, each with a specified latitude and longitude, along with, if available, phone numbers that are associated with of each of these entities, c) another database 40 with the constantly updated GPS location and status of all the software equipped cellular phone/PDA/GPS systems that are part of the communications net.

Each cellular phone/PDA/GPS system is identified on the display of the other phone systems by a symbol that is 45 generated to indicate its identity. The symbol is placed at the correct geographical location and is correlated with the map on the display. Each cellular phone/PDA/GPS System may enter other entities (locations of people, vehicles, buildings, facilities, and other entities) into its database. This information can be likewise transmitted to all the other participants on the communications net. The map, fixed entities, and cellular phone/PDA/GPS System communications net participants' latitude and longitude information is related to the display x, y display locations by a mathematical correlation 55 algorithm.

When the cellular phone/PDA/GPS System user uses his stylus or finger to touch one or more of the symbols or a location on the cellular phone display, the system's software causes the status and latitude and longitude information 60 concerning that symbol or location to be displayed.

To operate the present invention, the operator ("cellular phone one" or "phone one") starts the system by selecting the software which causes: a) the cellular phone to initiate (if it has not already been activated), b) the GPS interface to be 65 established, c) a map of the geographic area where the operator is located and operator's own unit symbol to appear

at the correct latitude and longitude on the map, d) the locations of people, vehicles, buildings, and the like that are part of the database appear as symbols on the map, e) the system selected item read out area (which provides amplification information for the communications net participant or object that has been touched on the display screen) to appear on the display, f) an insert area that contains various varying data including: the list of net participants, a list of messages to be read, an indication of what portion of the map is being displayed in major area and other information to appear on the display, and g) a row of primary software created "soft switches" that are always present on the display. One of these soft switches when touched causes a matrix of software driven layered switches (soft switches) to appear on the display in place of the readout and insert areas. Some of these soft switches, when touched, cause the system's functions to occur. Other soft switches cause yet another layer of soft switches to appear, replacing those that were previously displayed. The operator is provided an 20 indication of where the operator is in the layer of switches. and is able to return to the previous layer or to cause the layered switches to disappear and only the basic switches to remain. The operator can also use the phone's hardware pointing device (Navigation Pad) to control the soft switches. By using these soft switches, and hard switches that are part of the cellular phone, the operator can activate different maps, change map scales, select which fixed entities are desired to be displayed, display the information concerning the symbol the operator has touched, initiate phone voice calls, send messages (text, photographs and videos), enter symbols and information representative of other entities, view the locations and statuses of the other communications net participants, establish conference calls, pre-establish conference sub-nets that, when activated, cause all the phone numbers that are specified to be conferenced for voice, text and photograph and video communications, and transmit messages to remote phones which cause the remote phones to make calls, verbal announcements, vibrate, increase sound levels and other functions. To initialize the communications net, the cellular phone one operator selects, from a list, the other users (or all of them), that the operator desires to be part of the communications net. The system then polls the selected phones to activate and become part of the communications net. The selected phones then transmit their positions to all the other phones in the established net. Through interaction with one or more other software enabled cellular phones, symbols are generated on the operators' displays based on the participants' latitude and longitude that is exchanged between the cellular phones. The transmission of this information is based on an algorithm that considers time and or movement or upon a polling request. Each of the communication net symbols on the display represent a different cellular phone remote from cellular phone one. Each of the cellular phones has the phone numbers of all the phones in the communications net in its database. Each of the phones also has in its database the pre-established phone numbers for the fixed locations: people, buildings, facilities, military bases, and other desired locations that can be called in its database. The touch screen provided with the LCD display in the cellular phone includes x, y coordinates that are correlated with the map on the cellular phone display and the geographic location of the fixed sites and the cellular phones in the communications net. Each cellular phone can enter objects of interest by touching the display screen at the object's location on the display screen map. The operator can then assign these objects a category (car, person, tank, accident, or other

5

category). The latitude and longitude of these objects along with their category and other information is then sent on the communications network. Because each of the receiving telephone units has software that automatically converts the received data to the correct map location, the transmitted 5 symbols appear at the correct location without operator intervention and their category information is available by touching the symbol on the display screen.

Each cellular phone/PDA/GPS has the communications hardware along with the circuitry in software to initiate a 10 voice telephone call or transmit data messages, photographs, or videos by touching the screen with a stylus or finger at the symbol location displayed on the screen of the desired phone to be called and then selecting the "call" software switch on the display touch screen. The software will then cause the 15 cellular phone to call to the specific phone number represented by the symbol on the screen. This is done automatically. This action alleviates completely the necessity of actually looking up a phone number and manually entering the phone numbers required to make a cellular phone call. 20

A further benefit of the present invention is that more than one symbol can be specified to receive a cellular phone voice call and or data call, thus automatically conferencing them. The operator of the cellular phone can conference a small number of phones by touching the display screen locations 25 of the communications net participant symbols that the operator wishes to conference by selecting a "conference" soft switch. This action will then cause the selected units to be conferenced together. The conference call can be expanded to a greater number of users by providing addi- 30 tional software that would conference phones by sending a digital message to the remote cellular phones from the operator cellular phone causing each of the remote cellular phones to dial a specified 800 conference call number and enter each individual phone participant code. The originator 35 phone calls the same number and automatically enters the originator host code. Once all the phones have dialed the 800 number and entered their appropriate participant and host numbers, the conference call will be established. Furthermore, the operator of cellular phone one can pre-establish 40 conference nets for voice and data exchange by either selecting them from a list or a table or by touching the display screen locations of the communication net participant symbols that the operator wishes to conference and selecting a "conference net" soft switch. Once the operator 45 has done that, the software associates those communication net participants as being part of an established conference net. When the cellular phone operator chooses to call all the net participants, all the operator has to do is to select the designated software switch for that net to conference the 50 pre-selected conference participants together. That action will then place a call to all the conferences without further action. This method of conference calling can be also used to send text messages, photographs and videos.

Another embodiment of the invention can include a 55 unique feature in which cellular phone one can send a digital message using SMS, TCP/IP or another protocol to another cellular phone on the communications net by touching a display screen symbol on the geographical screen and then selecting the appropriate software switch to transmit a 60 digital message that would then remotely activate a program in the remote cellular phone to play a recorded audio file to announce an emergency and that a call to cellular phone one is required immediately. Since each of the remote cellular phones has the same software as cellular phone one and 65 includes a PDA and the ability to receive digital messages, the ability to control remote cellular phones to make verbal

6

announcements, display images, place return calls, place calls to another phone number, vibrate, change sound intensity and process and display pre-stored data, images and video can be achieved.

In accordance with the present invention, a multiple cellular phone communication network is set up using the invention. Each cellular phone contains the same software and circuitry that includes cellular phone technology, GPS navigation technology, and a PDA for displaying maps, georeferenced symbols, and data concerning symbols of interest and software created soft switches, transmitting and receiving digital SMS, TCP/IP and other protocol messages. To establish each other's communication net IP addresses, the cellular phones first exchange SMS messages (or use another method) that identifies their IP addresses. Each phone then transmits to all others its location and status in accordance with an established algorithm that is based on time and or movement. Each cellular phone is also able to poll the other cellular phones to transmit their locations. Each user is able to transmit to all the other users: text messages, photographs and videos. Using the present invention, a cellular telephone network can be set up in which all of the parties in the network have almost automatic and instant access to and status of any and all other parties in the network by touching the display screen symbol of the party he desires to initiate voice and data calls, thus, instantly activating the calls. This is an immense time saver in dealing with a cellular phone network for all the parties combined.

It is an object of this invention to provide an improved cellular telephone communication network among a plurality of cellular phones for greatly increasing the call up and initiation speed of each of the cellular phones with each other.

And yet another object of this invention is to enable each participant to automatically exchange IP addresses using SMS or another digital message format.

And yet another object of this invention is to enable each participant in the communications net to poll the other net participants to report or cease reporting their locations and status on the communication net.

And yet another object of this invention is to enable each participant in the communications net to be able to easily transmit entities of interest to the other participants of the net by touching the display at the entities' location on the map and causing a symbol to be entered and then entering the entities' category information.

And yet another object of this invention is to provide for initiating a cellular phone telephone call to another phone by touching the other phone's symbol on the screen of the cellular phone, which automatically activates the telephone call.

And yet another object of this invention is to provide a cellular phone network that provides for instant conference calling among a plurality of cellular phones by touching the screen of specific symbols for initiating the calls.

And yet another object of this invention is to provide a cellular phone network that provides for instant conference voice, text, photographs and video exchange by pre-establishing conferencing sub-nets and the subsequent activation of one of those sub-nets to establish a conference call.

And yet still another object of this invention is to provide a cellular phone that allows for remote alarm activation on another cellular phone to cause a remote cellular phone to make verbal announcements, display images, place return calls, place calls to another phone number, vibrate, change sound intensity and process and display pre-stored data, images and video.

7

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a front plan view of a cellular phone/PDA and display in accordance with the present invention.

FIG. **2** shows a front plan view of the cellular phone/PDA $_{10}$ of FIG. **1** with a different display.

FIG. 3 shows a flow chart of the operation of the present invention.

DETAILED DESCRIPTION

Referring now to the drawings and, in particular, FIG. 1, the present invention is shown generally at 10 that includes a small handheld cellular phone/PDA communications system in housing 12 that includes an on/off power switch 19, 20 a microphone 38, and an LCD display 16 that is also a touch screen system. The small area 16a is the Navigation Bar that depicts the telephone, GPS and other status data and the active software. With the touch screen system, the screen symbols are entered through GPS inputs or by the operator 25 using a stylus or finger 14 by manipulatively directing the stylus or finger 14 to literally touch display screen 16. The soft switches displayed on the screen are likewise activated by using a stylus or finger 14 and physically and manipulatively directing the stylus or finger to literally touch 30 display screen 16. The display x, y coordinates of the touched point are known by a CPU in the PDA section of the communication system that can coordinate various information contained in the PDA portion relative to the x, y coordinate position on the screen. Inside housing 12 is 35 contained the conventional cellular phone elements including a modem, a CPU for use with a PDA and associated circuitry connected to a speaker 24 and a microphone 38. A GPS navigational system that can determine the latitude and longitude of the cellular phone can be internal or external to 40 the housing 12. PDA/cellular phone units such as these are currently on sale and sold as a complete unit (or with an external connected GPS) that can be used for cellular telephone calls and sending cellular SMS and TCP/IP or other messages using the PDA's display and computer. The 45 GPS system is capable of determining the latitude and longitude and through SMS, TCP/IP, WiFi or other digital messaging software, to also transmit this latitude and longitude information to other cellular phones via cellular communications, WiFi or radio. The unit includes a pair of 50 cellular phone hardware activating buttons 20 to turn the cellular phone on and 22 to turn the cellular phone off. Navigation Pad actuator 18 is similar to a joy or force stick in that the actuator 18 manually provides movement commands that can be used by the PDA's software to move a 55 cursor. Switches 26 and 28 are designed to quickly select an operator specified software program. Device 24 is the system's speaker. Device 38 is the system's microphone. Switch 19 at the top left of the unit is the power on and power off switch.

The heart of the invention lies in the software applications provided in the system. Mounted inside housing 12 as part of the PDA is the display function screen and the CPU. The CPU includes databases that provide for a geographical map and georeferenced entities that is shown as display portion 65 16b that includes as part of the display various areas of interest in the particular local map section.

8

When looking at display 16, the software switches which appear at the very bottom of the display 16d are used to control many of the software driven functions of the phone. The software drawn and controlled switches are activated through the operator's use of the Navigation Pad 18, or a small track ball, force stick or similar hardware pointing device. Alternatively, the operator may chose to activate the software switch matrix by touching the screen with his finger or stylus at the switches' locations. When some of the software switches are activated, it will cause yet different software switches to appear. The bar display 16d shows the software switches "ZM IN, (zoom in)" "ZM OT (zoom out),", "CENT (center)" "GRAB, (pan/grab)" at the bottom of the screen. These software switches are for the operator 15 to perform these functions. The "SWITH (switch)" software switch at the lower right causes the matrix of layered software switches to appear above the bottom row of switches. Through use of the software switches, one can also manipulate the geographical map or chart display. When looking at FIG. 1, permanent geographical locations and buildings are shown. For example, the police station is shown and when the symbol is touched by the stylus or finger, the latitude and longitude of the symbol's location, as shown in display section 16c, is displayed at the bottom left of the screen. The bottom right side of display 16c is a multifunction inset area that can contain a variety of information including: a) a list of the communication link participants; b) a list of received messages; c) a map, aerial photograph or satellite image with an indication of the zoom and off set location of the main map display, which is indicated by a square that depicts the area actually displayed in the main geographical screen 16b; d) applicable status information; and e) a list of the communication net participants.

Also shown on the display screen 16, specifically the geographical display 16b, is a pair of different looking symbols 30 and 34, a small triangle and a small square, which are not labeled. These symbols 30 and 34 can represent communication net cellular phone users in the displayed geographical area that are part of the overall cellular phone communications net used in this invention wherein each of the users has a similar cellular phone to the one shown in FIG. 1. The latitude and longitude of symbol 30 is associated within a database along with a specific phone number. The screen display 16b, which is a touch screen, provides x and y coordinates of the screen 16b to the CPU's software. The software has an algorithm that relates the x and y coordinates to latitude and longitude and can access a communications net participant's symbol or an entity's symbol as being the one closest to that point. In order to initiate a telephone call to the cellular phone user represented by symbol (triangle) 30 at a specific GPS provided latitude and longitude which has been sent to the cellular phone shown in FIG. 1, the operator or initiator of what we call cellular phone one in FIG. 1 can take the stylus or finger 14, touch the triangle 30 with the stylus or finger, and then touch a "call" software switch from a matrix of displayed switches that will overlay the display area 16c and immediately the cellular phone one will initiate a cellular phone telephone call to the cellular phone user at the location shown that represents symbol 30. A second cellular phone user is represented by symbol 34 which is a small square but could be any shape or icon to represent an individual cellular phone unit in the display area. The ring 32 around symbol 30 indicates that the symbol has been touched and that a telephone call can be initiated by touching the soft switch that says "call." When this is done, the

telephone call is placed. Another type of symbolic display can indicate that the call is in effect. Furthermore, the operator of cellular phone one can call the police station or other locations, buildings, or facilities (whose phone numbers are stored in the database) by touching them on the 5 display screen using the stylus or his finger and then the call switch. Additionally, the operator can touch both symbol 34 and symbol 30 and can activate a conference call between the two cellular phones and users represented by symbols 30 and 34. Again, a symbolic ring around symbol 34 indicates 10 that a call has been initiated.

The system shown in FIG. 1 can also initiate a telephone conference call for a small number of phones using a stylus or finger contact to touch all the displayed symbols on display 16 that the initiator desires to conference and then 15 selecting the conference call soft switch. The operator can also pre-establish a conference sub-net that the operator desires to be able to rapidly call. The operator performs this task by touching the symbols or by selecting participants from a list or a matrix of the participant addresses and 20 assigning the participants to a net software switch. When the operator desires to place a conference call to these participants, the operator simply touches the net soft switch associated with this group. Software is provided in the unit that mimics setting up a normal small conference call from 25 "phone one" to each of the cellular phones the user had indicated by touching their symbols or selecting their subnet soft switch on the screen. Once the first call is complete, the party will be automatically put on hold and other callers will be called or answered in sequence and put on hold until 30 all the parties are on line at which time the conference call will be announced at each phone. As each participant is called, the phone will announce that a conference call requested by cellular phone one is in progress. This will all be done by software.

If a conference call is desired that includes more than a small number of phone users, the use of an 800 number conferencing service is required. The initiator or operator of cellular phone one would select the "conference 800" call software switch and then use the stylus or finger to touch the 40 cellular phone users' symbols to whom the calls are to be placed. For example, 50 users are desired on a conference call. The cellular phone would send out a SMS or TCP/IP message to all of the cellular phone displays that requests each cellular phone to call an 800 number (the given number 45 for a conference call) to conference with cellular phone one. Each individual cellular phone user at that point in time would then be verbally notified that a conference call was requested. When the user selected the "accept" software switch, the phone would then call the 800 number and enter 50 its conference participant code.

Another feature available in the cellular phone/PDA system shown in FIG. 1 is its ability to activate a remote cellular phone to make verbal announcements, display images, place return calls, place calls to another phone number, vibrate, 55 change sound intensity and process and display pre-stored data, images and video. As an example, on the PDA screen display 16, a software switch will be provided that would allow cellular phone one to call in an emergency situation and that would basically initiate an emergency audio 60 response call. Using the stylus or finger again, a symbol such as 30 would be touched with the stylus or finger indicating a call to be made. The software switch labeled "call" would cause other software switches to appear, one of which would be "call provide emergency audio response" which when 65 touched by the stylus or finger 14 would cause the cellular phone one system to automatically call the telephone num-

ber represented by symbol 30. The cellular phone 30 includes software that when it receives the SMS or TCP/IP message, can activate an audio message that announces "emergency please call cellular phone one immediately." The announcement would be done through the cellular phone speaker.

10

Thus, the system is capable of initiating a cellular phone call by touch only, initiating conference call by touch only and activating a remote cellular phone to announce an emergency and other messages and elicit the audio response in the remote cellular phone by touch only.

Referring now to FIG. 2, the same cellular phone/PDA 10 is shown with the soft switch matrix displayed at 16cc and 16d. The cellular phone/PDA is capable of an alternative method of contacting the participants. As shown in FIG. 2 and display 16cc, a plurality of squares is displayed having letters and numbers, each square of which indicates a different participant such as "A1SQD." Also, on the right hand side, top line is a switch option called "call." The bottom line 16dd shows ZM IN, ZM OUT, CENT, GRAB and SWIT. Using this alternative telephone method, the initiator can touch individual squares, each having a reference to a participant to initiate one call or a conference call with all of the parties. These can also be joined in a single NET 1 as shown. Subsequent phone calls with the particular designated parties or participants established with NET 1 can subsequently be initiated just by touching NET 1 with the stylus or with a finger. The displayed information can be layered with a plurality of "NETS" on a next layer for contacting groups of participants in each NET. This is used in lieu of the screen symbols for conference calls.

Referring now to FIG. 3, a flow chart is shown of the activities provided by the present invention and the methodology. First, we provide a cellular phone that includes PDA computer technology and a GPS navigation system that provides to the PDA the location of the cellular phone in latitude and longitude at all times. The cellular phone includes an LCD display with touch screen features for use with a stylus or finger.

The communication device is also given a database that includes a geographical display on the LCD display and software that coordinates the x and y coordinates on the LCD display touch screen with the geographical display. There is also software that places symbols on the geographical display that represent other cellular phone users that are part of the communications net. All the participant's cellular phones that are a part of the communications net include an integrated or electronically connected GPS navigational system. Each phone can call the other cellular phones and request that they broadcast their latitude and longitude locations and status information. Each cellular phone can enter other entities of interest and assign each of them a category (car, person, tank, accident, or other category). The latitude and longitude of each of these entities along with each category is then sent on the communications network. Each phone can also have the latitude and longitude and phone numbers of fixed (geographically referenced fixed locations including: restaurants, gas stations, hospitals, fire departments, military bases, homes, businesses, government facilities, street locations, and the like) are also contained in the data base and displayed on the screen.

Therefore, the present invention can provide a cellular phone PDA GPS system that includes a geographical display that shows one or more other cellular phone users symbolically displayed on the screen and also entered entities that each of the cellular phone users consider to be items of interest, along with pre-established points of interest (geo-

11

graphical referenced fixed locations including: restaurants, gas stations, hospitals, fire departments, military bases, homes, businesses, government facilities, street locations, and the like).

The present invention also includes a database that has the 5 specific cellular phone telephone numbers of each of the displayed symbols thus providing a relationship between the symbol, its location on the geographical screen and the stored memory phone number.

There is also a software program that allows the operator of cellular phone one to touch one of the symbols representing a phone user on the display screen and to initiate a call by touching the appropriate switch with a stylus or finger at which time the software will automatically retrieve the designated symbolic phone telephone number from 15 memory and will initiate instantly a telephone call to the cellular phone number that is associated with the symbol. This is all done by merely touching the symbol representing the phone in the database and touching the "call" soft switch.

In addition, with multiple cellular phone users present, the 20 operator of cellular phone one can use the stylus or finger and touch more than one cellular phone user's symbol and then touch a software switch that says "conference call" wherein the software will initiate and establish conference calls with all of the designated cellular phone users by the 25 touch of a stylus or finger or by selecting a pre-established participant conference net switch. In the event that there are more than a small number of phone users in the area that need to be established on a conference call, because of the technological limitations of conference calls on cellular 30 phones, the system will send a different message that causes the remote cellular phone to call a specific 800 conference number that can establish a much larger number of conference callers. Thus, if the user selects to conference more than an established number of phone users for a conference 35 call, the software will indicate that the 800 number software switch is to be utilized.

In addition the operator of cellular phone one can address text messages, photographs and video for transmission to one or more net participants by either touching their symbols 40 and selecting the appropriate soft switch or selecting the appropriate call net.

Another important feature of the present invention is that the operator or initiator of cellular phone one can by touching a switch on the display, send through the PDA 45 system, a signal and digital message to all the cellular phones in the communications net or to designated cellular phone(s), represented by their symbols on the geographic display, an emergency message which requires a response. When received, the software in the remote cellular phone 50 causes the remote cellular phone to initiate an audio message to the cellular phone user that there is an emergency (or another message) and to call the initiator immediately. This is accomplished by the message sent from cellular phone one to the software in the remote cellular phone(s).

In summary, the present invention provides for expeditious data exchange and cellular phone calls to one or more users by merely touching the display screen location of a remote cellular phone user's symbol to initiate the call. Other features include conference calling by stylus or finger 60 and a rapid emergency remote activation and causing a remote phone to: annunciate various pre-established messages, execute text to speech software, increase its volume level, vibrate, show photographs, or show videos.

The instant invention has been shown and described 65 herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that depar-

12

tures may be made there from within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

- 1. A method of providing a cellular phone communication network for designated participating users, each having a similarly equipped cellular phone that includes a CPU, GPS navigational system and a touch screen display comprising the steps of:
 - a) providing for the selective polling of position and status information from one user among all of the other users equipped with cellular phone/PDA/GPS system and its associated software;
 - b1) providing for the entering of other entities of interest into the cellular phone CPU and assigning the other entities of interest a category;
 - b2) providing the latitude and longitude of the entities of interest along with their categories being automatically sent on the communications network;
 - c) providing rapid voice call initiation to one or more locations whose phone number is available in a geographical referenced database using the touch screen;
 - d) providing rapid voice call initiation to the users of the cellular phone/PDA/GPS network system using the touch screen:
 - e) providing rapid transmission of free, operator selected text messages, photographs, and video to another cellular phone using the touch screen;
 - f) providing rapid conference calling multiple phones that are contained within the geographical referenced data base; and
 - g) providing remote control from one cellular phone/ PDA/GPS system to any of the other cellular phone/ PDA/GPS system phones, including the ability to control remote cellular phones to make verbal announcements, display images, place return calls, place calls to another phone number, vibrate, change sound intensity and process and display pre-stored data, images and stored video.
- 2. The method of providing a communication network as in claim 1 including the step of:
 - providing in each of the cellular phones a remotely activatable software program for turning the cellular phone on and off and that initiates a signal from the remote cellular phone displaying a pre-stored message and to call the initiating cellular phone; and
 - providing software that activates the remote cellular phone causing the remote cellular phone to generate said pre-stored message to the remote cellular phone user.
- 3. A communication system to provide a cellular phone network for a group of participants, each of the participants having an individual portable cellular phone that includes voice communication, free and operator selected text messages, photographs and video, a CPU and a GPS navigational system that can accurately determine the location of each cellular phone, each of the cellular phones in the communications net of participants containing:
 - said CPU and memory;
 - a touch screen display;
 - symbol generator in said CPU that can generate symbols that represent each of the participants' cell phones in the communication network on the display screen;
 - a database that stores the individual telephone numbers related to each of the symbols each of which represents a participant in the communication network;

13

- cellular phone call initiating software in said CPU connected to the telephone number database and the touch screen and the symbols on the touch screen whereby touching an individual symbol will automatically initiate a cellular phone telephone call to the user represented by the symbol that includes said voice communication, free and operator selected text messages, photographs and video; and
- said display including databases that display geographical information that includes showing the geographical location of each of the symbols representing participants in the communication network, fixed locations, and entered items of interest.
- **4.** A communication network that includes said participants, as in claim **3** further comprising:
 - said software for automatically initiating a cellular phone call to a user represented by a symbol includes initiating a conference call to two or more of the participants from a base phone by touching the specific symbols of those participants that will be participating in a conference call by touching the symbol of each of those users and providing a software switch to initiate the conference call by touching the screen whereby each of the initiated conference participants will be called by the base phone to establish a conference call.
- 5. A communication network as in claim 4 whereby the communication network can include a large number of participants in a conference call comprising:
 - conference call initiating software in said CPU that is made by sending a digital message to the remote cellular phones from said phone, by touching the symbol of each of the participants, of an 800 number and a participant code that cause each of the participants to call the 800 number and to enter a participant code to 35 establish the conference call with the said phone.
 - 6. A communication network as in claim 3 comprising: said CPU including a software program to initiate a call to one of the participants represented by a symbol on said touch screen in conjunction with a software switch displayed on said touch screen and software to initiate the cellular phone call automatically that turns the remote cellular phone on or off and generates in the receiving remote cellular phone a pre-stored message that alerts the remote cellular phone user to call the initiator.
- 7. A method of establishing a cellular phone communication network for designated participants, each having a similarly equipped cellular phone that includes voice communication, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system and a touch screen display comprising the steps of:
 - a) generating one or more symbols on the touch display screen, each representing a different participant that has a cellular phone that includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display;
 - b) providing and storing in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which relates to a different symbol of each of the participants in the communication network;
 - c) providing initiating cellular phone calling software in 65 each cellular phone that is activated by touching a symbol on the touch display that automatically initiates

14

- a cellular phone call using the stored cellular phone number to the participant represented by the symbol; and
- d) generating a geographical location chart on said display screen to show the geographical location of each of the symbols representing the participants in the communication network by latitude and longitude.
- **8**. The method of establishing a communication network as in claim **7** comprising the additional step of:
 - e) providing conference call initiating software that allows each of the participants to initiate a conference call to other participants by touching each of the symbols on the touch screen representing participants who will participate in the conference call.
- **9**. A method of establishing a communication network as in claim **7** including the step of:
 - f) providing conference call initiating software for a large number of participants represented by the symbols on the touch screen in which each of the proposed conference call participants are established by touching the participant's symbol on the screen which causes the cellular phone initiating the conference call to transmit messages to each of the users represented by the touched symbols that tells each of the called participants through their cellular phones to call a particular 800 number to establish the conference call.
- 10. A cellular phone for use in a communication network for a plurality of participants comprising:
 - a cellular phone transmitter and receiver for transmitting and receiving voice communication, free and operator selected text messages, photographs, and video;
 - a small hand held portable housing containing said cellular phone transmitter and receiver;
 - a touch display screen mounted in said housing;
 - a modem connected to said cellular phone transmitter and receiver;
 - a CPU connected to said cellular phone transmitter and receiver:
 - a GPS navigation system connected to said CPU and to said cellular phone transmitter and receiver on said touch screen:
 - a database connected to said CPU that includes of a list of telephone numbers that relate to specific symbols;
 - a symbol generator connected to said CPU and said database for generating symbols on said touch display screen;
 - CPU software for selectively polling other participants with a cellular phone;
 - call initiating software connected through said CPU and said telephone database and said symbol generator whereby when a user touches the symbol displayed on a said touch display screen the cellular phone call is automatically initiated to the cellular phone represented by the symbol; and
 - a geographical database connected to said CPU to provide a geographical display on said touch screen representing a defined geographical area that also displays symbols representing each of the participants by latitude and longitude.
 - 11. A cellular phone as in claim 10, including:
 - conference call initiating software connected to said CPU that allows the cellular phone user to initiate a conference call to a plurality of participants represented by symbols by touching each of the symbols and initiating a conference call software switch.

12. A cellular phone as in claim 10, including:

15

conference call initiating software for large number of conference call participants that allows the user of the cellular phone to initiate a conference call to the cellular phone users represented by the symbols on the screen by touching each of the symbols representing a participant in the conference call which initiates an automatic cellular phone call to the remote cellular phone users represented by the symbols displaying a text message to call a particular 800 number to establish the conference call.

13. A cellular phone as in claim 12, including:

providing the ability to pre-establish phone conferencing nets by touching the said touch display screen at a symbolic representation of the person(s) location or by selecting the parties from a list appearing on the touch display screen and assigning them to a software drawn switch made to appear on a touch display screen; and

providing the ability to conference the participants previously assigned to a net by using a software drawn switch(es) for a conference call, whereby the user 16

touches the net software switch to initiate the call to all of the participants on the net.

- 14. A layered set of software drawn switches as in claim 13, including:
 - a matrix of layered software drawn switches so that each switch that when activated on the touch display screen overlays the previously drawn matrix of switches, the matrix level of which is noted in one of the switch locations, thus providing the operator a large choice of switches in the same physical space on the touch display screen and informing the operator of the level of switches that are displayed.

15. A cellular phone as in claim 10, including:

an emergency call initiating software connected to said CPU that includes a remote cellular phone activating signal for causing a remote cellular phone that is called by touching a symbol representing the cellular phone to be called to generate and play an audio message telling the remote cellular phone user that there is an emergency and to call the cellular phone initiator.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,031,728 B2 Page 1 of 1

APPLICATION NO.: 10/711490

DATED: April 18, 2006

INVENTOR(S): Malcolm K. Beyer, Jr.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1, Line 37, should read

"Digital SMS (Short Message Service) and TCP/IP mes-..."

Column 5, Line 35, should read

"...enter each individual phone's participant code. The originator..."

Column 13, Line 43, should read

"...remote cellular phone's software on or off and generates in the..."

Signed and Sealed this

Eighth Day of April, 2008

JON W. DUDAS
Director of the United States Patent and Trademark Office

Exhibit B

US007630724B2

(12) United States Patent

Beyer, Jr. et al.

(10) Patent No.: US (45) Date of Patent:

US 7,630,724 B2 Dec. 8, 2009

(54) METHOD OF PROVIDING A CELLULAR PHONE/PDA COMMUNICATION SYSTEM

(75) Inventors: **Malcolm K. Beyer, Jr.**, Jupiter Inlet Colony, FL (US); **Christopher R. Rice**,

Monroe, WA (US)

(73) Assignee: Advanced Ground Information

Systems, Inc., Jupiter Inlet Colony, FL

(US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 450 days.

(21) Appl. No.: 11/308,648

(22) Filed: Apr. 17, 2006

(65) Prior Publication Data

US 2006/0199612 A1 Sep. 7, 2006

Related U.S. Application Data

- (63) Continuation-in-part of application No. 10/711,490, filed on Sep. 21, 2004, now Pat. No. 7,031,728.
- (51) **Int. Cl. H04W 24/00** (2009.01)
- (52) **U.S. Cl.** **455/457**; 455/416; 455/417

(56) References Cited

U.S. PATENT DOCUMENTS

6,204,844	B1*	3/2001	Fumarolo et al.	 715/736
6,662,016	B1*	12/2003	Buckham et al.	 455/457

6,868,337 H	3/2005	Muramatsu
2003/0139150 A	A 1 7/2003	Rodriguez et al.
2003/0200259 A	A1* 10/2003	Tsuge 709/203
2004/0192331 A	A1* 9/2004	Gorday et al 455/456.1
2004/0204070 A	41* 10/2004	August et al 455/557
2004/0266456 A	A 1 12/2004	Bostrom et al.
2006/0031927 A	A1* 2/2006	Mizuno et al 726/11

* cited by examiner

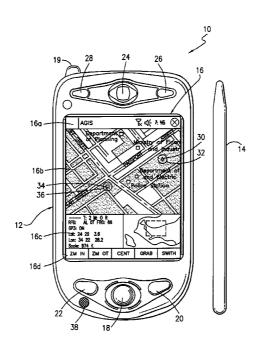
Primary Examiner—Nick Corsaro
Assistant Examiner—Amanuel Lebassi

(74) Attorney, Agent, or Firm—Malin Haley DiMaggio Bowen & Lhota, P.A.

(57) ABSTRACT

A cellular, PDA communication device and communication system for allowing a plurality of cellular phone users to monitor each others' locations and status, to initiate cellular phone calls by touching a symbol on the touch screen display with a stylus which can also include point to call conferencing calling. Each participant's cellular phone PDA device includes GPS navigation receiver with application software for point to call cellular phone initiation to participants and geographical entities including vehicles, persons or events, conference calls and video transfers. The method and system also includes automatic shifting from GPRS/EDGE/CDMA/ 1XEVDO to SMS when any of the cellular phones in the communication network is in the voice mode and in use and for automatic shifting back to GPRS/EDGE/CDMA/1XE-VDO upon completion of the voice phone call. In addition, using the system, a full transfer of photographs, video clips and high speed data can be used between any cellular phones regardless of who the cellular phone vendors or cellular phone companies are and in either CDMA, GSM, WiFi or a combination of the two.

16 Claims, 6 Drawing Sheets



U.S. Patent Dec. 8, 2009 Sheet 1 of 6 US 7,630,724 B2

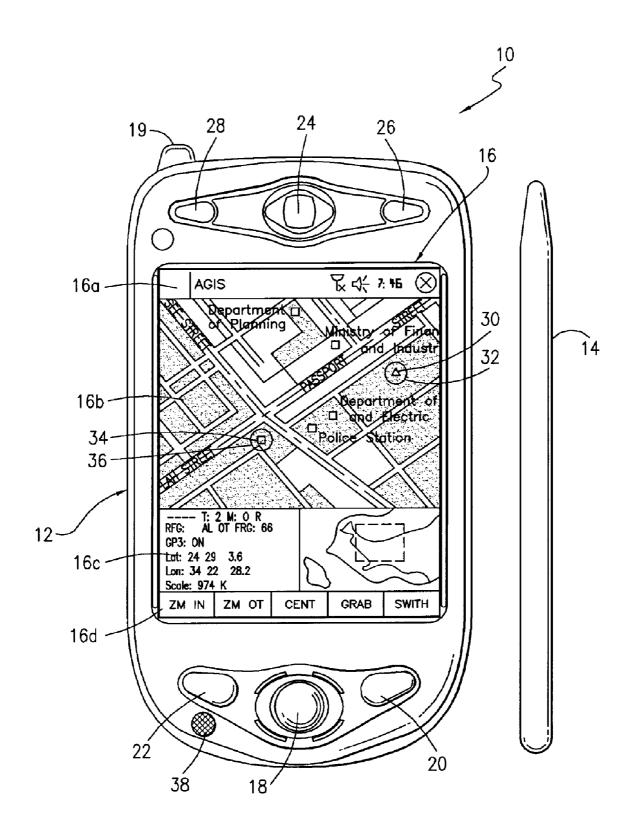


FIG. 1

U.S. Patent Dec. 8, 2009 Sheet 2 of 6 US 7,630,724 B2

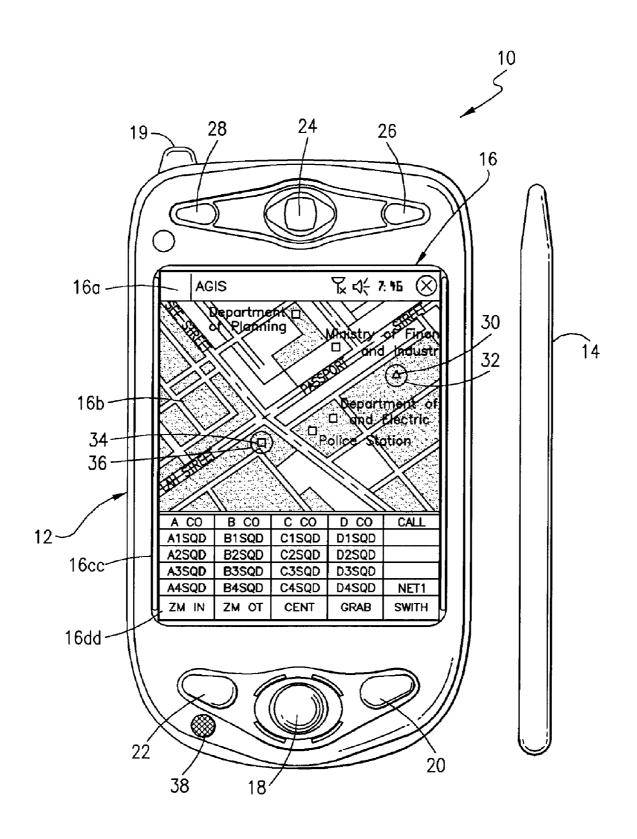


FIG. 2

U.S. Patent

Dec. 8, 2009

Sheet 3 of 6

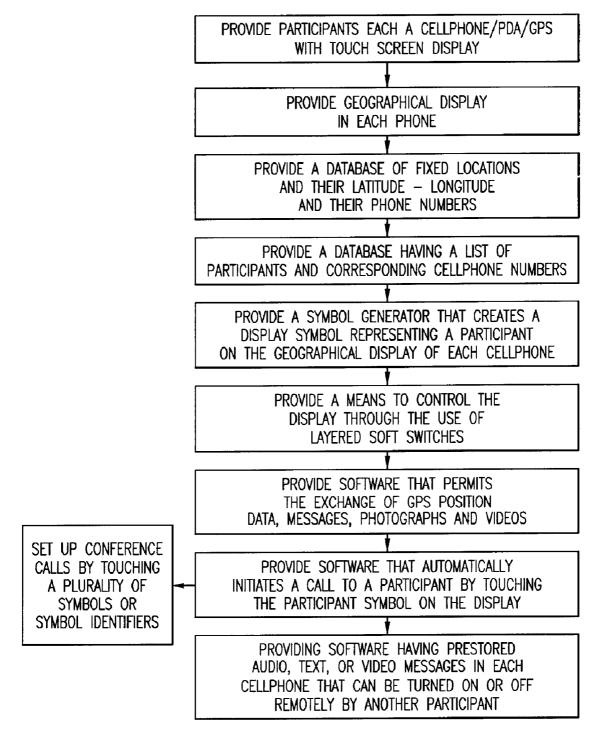
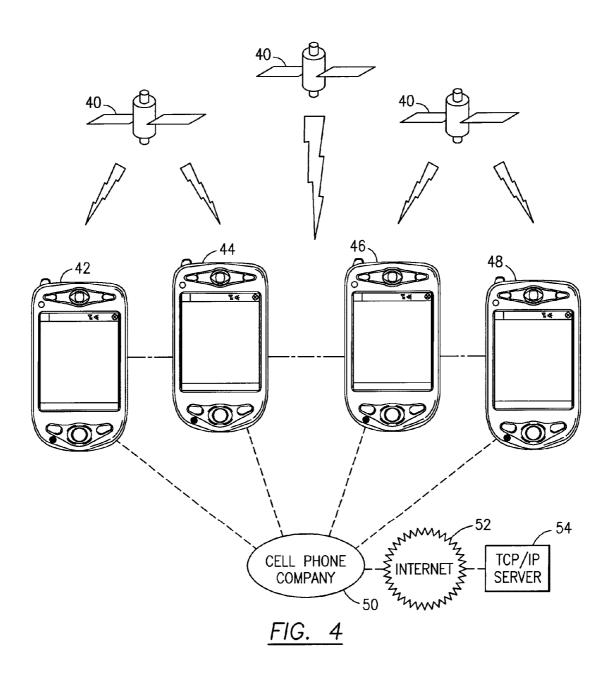


FIG. 3

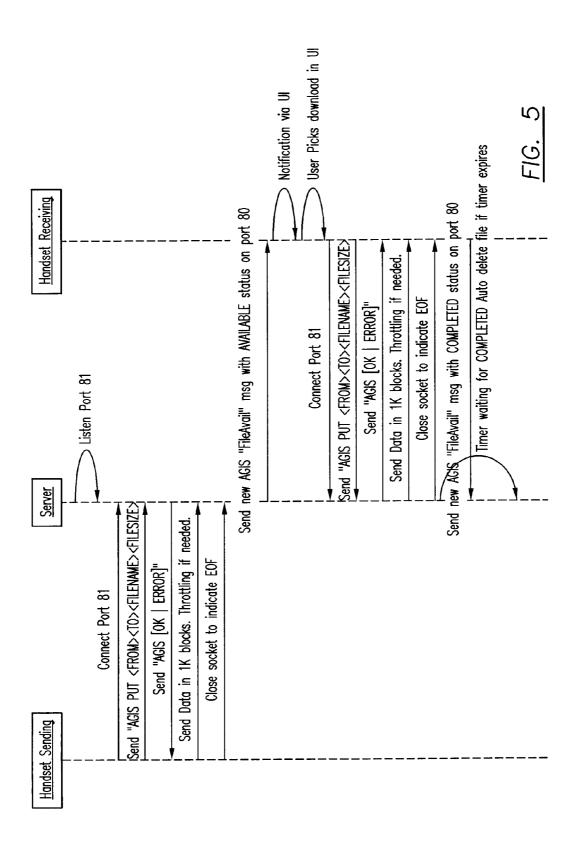
U.S. Patent Dec. 8, 2009 Sheet 4 of 6



U.S. Patent

Dec. 8, 2009

Sheet 5 of 6



U.S. Patent Dec. 8, 2009 Sheet 6 of 6

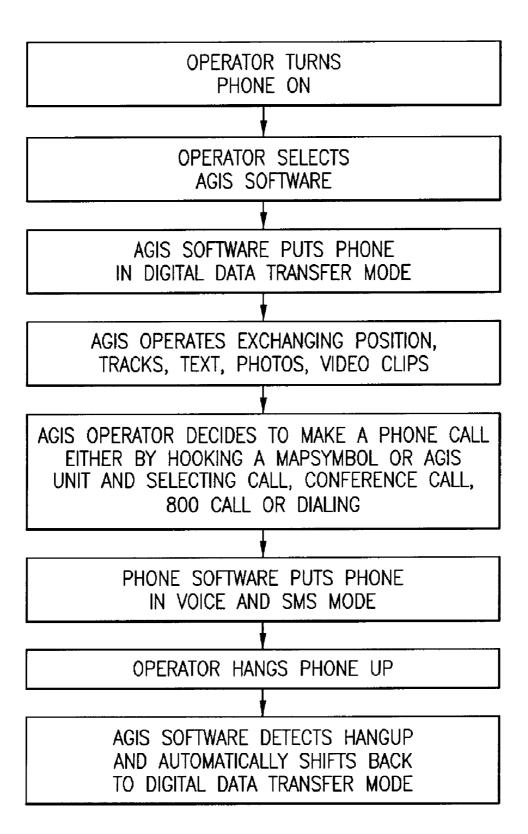


FIG. 6

1 METHOD OF PROVIDING A CELLULAR PHONE/PDA COMMUNICATION SYSTEM

FIELD OF THE INVENTION

This invention relates generally to an integrated communications system using a plurality of cellular/PDA/GPS phones for the management of a group of people through the use of a communications net and, specifically, to provide each user with a cellular/PDA/GPS/phone that has software application programs and databases that permit all the users to continuously know each other's locations and status, to rapidly call and communicate voice, high speed internet data, photographs and video clips among the users by touching display screen symbols and to enable the users to easily 15 access data concerning other users and other database information.

DESCRIPTION OF RELATED ART

The purpose of a communications system is to transmit information bearing signals from a source, located at one point, to a user destination, located at another point some distance away. A communications system is generally comprised of three basic elements: transmitter, information chan- 25 nel and receiver. One form of communication in recent years is cellular phone telephony. A network of cellular communication systems set up around an area such as the United States allows multiple users to talk to each other, either on individual calls or on group calls. Some cellular phone services enable a 30 cellular phone to engage in conference calls with a small number of users. Furthermore, cellular conference calls can be established through 800 number services. Cellular telephony also now includes systems that include Global Positioning System (GPS) navigation that utilizes satellite navi- 35 gation. These devices thus unite cellular phone technology with navigation information, computer information transmission and receipt of data.

Digital Smart Message Service (SMS) and TCP/IP messages can be transmitted using cellular technology such as 40 various versions of GSM and CDMA or via a WiFi local area network. One implementation of these GPS location reporting cellular systems is for the data to go to a remote central site where the information is displayed for a person to monitor the locations of the cellular units that have the combined cellular 45 GPS phone. Another implementation permits the cellular phone users to also view the location of other GPS equipped units. A drawback of the current implementation is that these systems are either all on or all off. There is no way to selectively activate participants or to stop the participants from 50 participating in the network or for participants to set their reporting intervals that is based on time or distance traveled. The use of the current combined cellular phone/PDA technology has drawbacks when calling. When an operator makes a cellular phone call using the PDA to display a map (that also 55 may depict geo-referenced businesses, homes and other facilities' locations and phone numbers), the cellular phone/ PDA operator is required to display the numeric phone number by touching the display screen at the correct location of that entity on the map, memorize the numeric phone number, 60 and select a different display to physically enter the phone number to make the call and then, if desired, go back to the map display. Needless to say, this is a cumbersome process. Sending a text message or an email to a location, business, home or facility that appears on a PDA map display or to 65 another cellular phone can also be a cumbersome process as the PDA operator has to find the phone number or email

2

address of the location on the map display, memorize the phone number or email address, then go to a different display to enter a text message, enter the text message, send the text message and then shift back to the map display program. Furthermore, for a phone to send data concerning a new entity of interest, not currently on the geo-referenced map display (car, person, tank, accident, or other entity), the operator must type in the information and the latitude and longitude of the new entity of interest.

U.S. Patent Application No. 2003/0139150 published Jul. 24, 2003 shows a portable navigation and communication system. In one embodiment, the system combines within a single enclosure a GPS satellite positioning unit, mobile telephony using cellular phone technology and personal computing capable of wired or wireless internet or intranet access using a standard operating system. The purpose of this invention is to provide portable navigation for an individual. However, to operate the device, one still needs to utilize a keypad with the telephone functions. U.S. Patent Application No. 20 2003/0139150 described a wireless communication system operating the PDA in a conventional manner. There is no provision for displaying the location of other similarly equipped systems. There is no provision to cause other similarly equipped cellular phone/PDA users to transmit their locations. There is no provision for entering other entities of interest by touching the display screen at their locations on a map. There is no provision for making a telephone call by touching the display screen at a net participant's symbol or entered facility (police station, fire station, etc.) symbol to initiate automatically the telephone call to that user or by touching multiple symbols to make conference calls. There is no provision for sending text messages, photographs or videos by touching the net participant(s)' symbol(s) on the display screen to automatically send text messages, photographs or videos to that participant or participants. There is no provision to go to a facility's web site or to automatically fill in a facility's E-mail address. There is no description or disclosure of a procedure to cause digital messages to be sent to a remote cellular phone that would cause the cellular phone to make verbal announcements, increase sound intensity, vibrate or to call back or to call another phone number. There is no description of the uses of layered soft switches which confine the switches to a particular vicinity of the PDA's display screen.

SUMMARY OF THE INVENTION

A plurality of cellular phone/WiFi/PDA/GPS devices each having application software and databases to provide a communication network having: a) the ability to selectively poll each of the other PDA/GPS phone devices with each participant to start reporting its position and status information directly to all or selected users equipped with the same cellular phone/PDA communication/GPS devices in the communications net so that each of the devices that the data is transmitted to is provided a display of the location, status and other information of the other users; b) the ability of each of the cellular phone/PDA devices to report to another device at an operator selected time rate or at a rate based on distance traveled; c) the ability to exchange other entities' of interest information and to assign these entities a category (car, person, tank, accident, or other event) by touching the display screen at the entity's location on the displayed map, and selecting the appropriate category switch; d) the ability to make rapid voice and data call initiation to any other participant in the cellular phone/WiFi net whose phone number is available in a geo-referenced database including the cellular

3

phone/PDA/GPS devices in a communications net by touching the display screen at the appropriate map location on the PDA map display and selecting a call switch; e) the ability to make rapid voice, and conference call initiation to locations, businesses, homes and facilities whose phone numbers are 5 available in a geo-referenced database including the cellular phone/PDA/GPS devices in a communications net by touching the display screen at the appropriate other user locations on the PDA map display and selecting a conference call switch; f) the ability to access a facility's URL or to automati- 10 cally fill in their E-mail address; g) the ability to remotely control from one cellular phone/PDA/GPS any of the other cellular phone/PDA/GPS systems phones including the ability to control remote cellular phones to make verbal prerecorded announcements, place return calls, place calls to 15 another phone number, vibrate, execute text to speech software, change sound intensity, remotely control software and functions resident on the remote phone and process and display information by touching the display screen at their location on the PDA display and selecting the appropriate switch; 20 and g) the ability to layer a sufficient number of switches or buttons on the PDA display to perform the above functions without overlaying the map.

It is an object of this invention to provide an improved of cellular phones for greatly decreasing the operator actions necessary to establish calling and conferencing between each of the cellular phones.

And yet another object of this invention is to enable each participant to automatically exchange IP addresses using 30 SMS or another digital message format.

And yet another object of this invention is to enable each participant in the communications net to poll the other net participants to report or cease reporting their locations, identity and status on the communication net.

And yet another object of this invention is to enable each participant in the communications net to be able to easily transmit an entity of interest to the other participants of the net by touching the display screen at the entity's location on the map and causing a symbol to be generated on the screen and entered and then entering the entity's category information.

And yet another object of this invention is to provide for initiating a cellular phone telephone call to another phone by touching the other phone's symbol on the screen of the cellular phone, which automatically activates the telephone call.

And yet another object of this invention is to provide a cellular phone network that provides for instant voice conference calling and the exchange of free text, preformatted messages, photographs and video among a plurality of cellular phones by touching the display screen of specific geo-referenced map symbols for initiating the calls.

And yet another object of this invention is to provide a cellular phone network that provides for instant conference voice, text, photographs and video exchange by pre-establishing conferencing sub-nets and the subsequent activation of one of those sub-nets to establish a conference call

But yet still another object of the invention is to provide for a communication system that uses cellular telephone network that allows for photographs and video clips to be transferred 60 ("pushed") between and among the cellular phone users across multiple cellular carriers, between smart phone and PCs.

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a front plan view of a cellular phone/PDA having a touch screen display in accordance with the present invention.

FIG. 2 shows a front plan view of the cellular phone/PDA of FIG. 1 with a different touch screen display.

FIG. 3 shows a flow chart of the operation of the present invention.

FIG. 4 shows a schematic diagram depicting GPS satellites, a plurality of cellular phone/PDA units, the cellular phone company, the internet and the command server that allows automatic shifting between high speed cellular internet communications and voice communications.

FIG. 5 shows a process flow diagram of the transfer protocol in accordance with the present invention.

FIG. 6 shows a flow diagram for automatic shifting between voice and high speed cellular internet communications.

PREFERRED EMBODIMENT OF THE INVENTION

Referring now to the drawings and, in particular, FIG. 1, cellular telephone communication network among a plurality 25 the present invention is shown generally at 10 that includes a small handheld cellular phone that includes a personal digital assistant (PDA) and a global positioning system receiver (GPS) communications device in housing 12 that includes an on/off power switch 19, a microphone 38, and an LCD display 16 that is also a touch screen system. The small area 16a is the navigation bar that depicts the telephone, GPS and other status data and the active software. AGIS software refers to the application software used in this invention. AGIS is a trademark of AGIS Corporation. Each cell phone includes a CPU and databases that store information useful in the communication network. The CPU also includes a symbol generator for creating touch screen display symbols discussed herein. With the touch screen 16, the screen symbols are entered through GPS inputs or by the operator using a stylus 14 (or operator finger) by manipulatively directing the stylus 14 to literally touch display 16. The soft switches 16d displayed on the display 16 are likewise activated by using a stylus 14 and physically and manipulatively directing the stylus to literally touch display 16. The display x, y coordinates of the touched point are known by a CPU in the PDA section of the communication system in housing 12 that can coordinate various information contained in the PDA portion relative to the x, y coordinate position on the display 16. Inside housing 12 is contained the conventional cellular phone elements including a modem, a CPU for use with a PDA and associated circuitry connected to speaker 24 and microphone 38. A GPS navigational receiver that receives signals from satellites that can determine the latitude and longitude of the cellular phone housing 12 can be internal or external to the housing 12. PDA/cellular phone units such as these are currently on sale and sold as a complete unit (or with an external connected GPS) that can be used for cellular telephone calls and sending cellular SMS and TCP/IP or other messages using the PDA's display 16 and computer (CPU). The GPS system including a receiver in housing 12 is capable of determining the latitude and longitude and through SMS, TCP/IP, WiFi or other digital messaging software, to also transmit this latitude and longitude information of housing 12 to other cellular phones in the communication network via cellular communications, WiFi or radio. The device 10 includes a pair of cellular phone hardware activating buttons 20 to turn the cellular phone on and 22 to turn the cellular

phone off. Navigation pad actuator 18 is similar to a joy or force stick in that the actuator 18 manually provides movement commands that can be used by the PDA's software to move a cursor on display 16. Switches 26 and 28 are designed to quickly select an operator specified software program.

Speaker 24 and microphone 38 are used for audio messages.

5

Speaker 24 and microphone 38 are used for audio messages. Switch 19 at the top left of device 10 is the power on and power off switch for the entire device.

cations provided in the device. Mounted within housing 12 as part of the PDA is the display 16 and the CPU. The internal CPU includes databases that provide for a geographical map and georeferenced entities that is shown as display portion 16b that includes as part of the display various areas of inter-

The heart of the invention lies in the AGIS software appli-

est in the particular local map section.

When looking at display 16, the software switches (soft switches) which appear at the very bottom of the display 16d are used to control by touch many of the software driven functions of the cellular phone and PDA. The software drawn and controlled switches are activated through the operator's 20 use of the navigation pad 18, or a small track ball, force stick or similar hardware display cursor pointing device. Alternatively, the operator may choose to activate the software switch matrix by touching the screen with a stylus 14 (or finger) at the switches' 16d locations. When some of the software 25 switches are activated, different software switches appear. The bar display 16d shows the software switches "ZM IN (zoom in)," "ZM OT (zoom out)," "CENT (center)" and "GRAB (pan/grab)" at the bottom of the screen. These software switches are for the operator to perform these functions. 30 The "SWITH (switch)" software switch at the lower right causes a matrix of layered software switches (soft switches) to appear above the bottom row of switches. Through use of the software switches, the operator can also manipulate the geographical map 16b or chart display. When looking at FIG. 35 1, permanent geographical locations and buildings are shown. For example, the police station is shown and when the symbol is touched by the stylus or finger, the latitude and longitude of the symbol's location, as shown in display section 16c, is displayed at the bottom left of the screen. The bottom right 40 side of display 16c is a multifunction inset area that can contain a variety of information including: a) a list of the communication link participants; b) a list of received messages; c) a map, aerial photograph or satellite image with an indication of the zoom and off set location of the main map 45 display, which is indicated by a square that depicts the area actually displayed in the main geographical screen 16b; d) applicable status information; and e) a list of the communication net participants. Each participant user would have a device 10 shown in FIG. 1.

Also shown on the display screen 16, specifically the geographical display 16b, is a pair of different looking symbols 30 and 34, a small triangle and a small square, which are not labeled. These symbols 30 and 34 can represent communication net participants having cellular phones in the displayed 55 geographical area that are part of the overall cellular phone communications net having the same device 10 used in this invention. The latitude and longitude of symbol 30 is associated within a database along with a specific phone number and, if available, its IP address and email address. The screen 60 display 16b, which is a touch screen, provides x and y coordinates of the screen 16b to the CPU's software from a map in a geographical database. The software has an algorithm that relates the x and y coordinates to latitude and longitude and can access a communications net participant's symbol or a 65 fixed or movable entity's symbol as being the one closest to that point.

6

For describing the network, the operator's phone is cellular phone "one." In order to initiate a telephone call to the cellular phone user (communication net participant) represented by symbol (triangle) 30 at a specific latitude and longitude display on chart 16b, the operator touches the triangle 30 symbol with the stylus 14. The operator then touches a "call" software switch from a matrix of displayed soft switches that would overlay the display area 16c. Immediately, the cellular phone will initiate a cellular telephone call to the cellular phone user at the geographical location shown that represents symbol 30. A second cellular phone user (communication net participant) is represented by symbol 34 which is a small square (but could be any shape or icon) to represent an individual cellular phone device in the display area. The ring 32 around symbol 30 indicates that the symbol 30 has been touched and that a telephone call can be initiated by touching the soft switch that says "call." When this is done, the telephone call is initiated. Other types of symbolic elements on the display 16 can indicate that a cellular phone call is in effect. Additionally, the operator can touch both symbol 34 and symbol 30 and can activate a conference call between the two cellular phones and users represented by symbols 30 and 34. Again, a symbolic ring around symbol 34 indicates that a call has been initiated.

Equally important, the operator of cellular phone "one" can call the police station or any other specific geographical facility displayed on the map, including: (buildings, locations of people, vehicles, facilities, restaurants, etc., (whose cellular phone numbers and, if available, E-mail addresses, IP addresses and their URLs were previously stored in the database) by touching a specific facility location on the map display using the stylus 14 and then touching the cellular phone call switch. As an example, the operator can touch and point to call a restaurant using a soft switch by touching the restaurant location with his stylus and then touching the call soft switch. The cellular phone will then call the restaurant. Thus, using the present invention, each participant can touch and point to call to one or more other net participants symbolically displayed on the map each of whom have a device as shown in FIG. 1 and can also point to call facilities that had been previously stored in the phone's database. Furthermore, this symbol hooking and soft switch technique can be used to go to a fixed facility's website or to automatically enter the fixed facility's E-mail address in an e-mail.

Each cellular phone/PDA/GPS user device is identified on the map display of the other participant user phone devices by a display symbol that is generated on each user phone display to indicate each user's identity. Each symbol is placed at the correct geographical location on the user display and is correlated with the map on the display. The operator of each cellular phone/PDA/GPS device may also enter one or more other fixed entities (buildings, facilities, restaurants, police stations, etc. and geo-referenced events such as fires, accidents, etc.) into its database. This information can be likewise transmitted to all the other participants on the communications net. The map, fixed entities, events and cellular phone/ PDA/GPS device communication net participants' latitude and longitude information is related to the "x" and "y" location on the touch screen display map by a mathematical correlation algorithm.

When the cellular phone/PDA/GPS device user uses a stylus or finger to touch one or more of the symbols or a location displayed on the cellular phone map display, the system's software causes the status and latitude and longitude information concerning that symbol or location to be displayed. In order to hook a symbol or "track" such as another net participant which represents an entity on the geo-referenced map display, or a fixed geographical entity such as a restaurant,

7

police station or a new entity observed by a cell phone user which is discussed below, the operator points at or near the location of a geo-referenced symbol appearing on the cellular phone/PDA display that represents a specific track or specific participant or other entity. The hook application software 5 determines that the stylus is pointed close to or at the location of the symbol and puts a circle, square or other indication around the symbol indicating that amplification information concerning the track is to be displayed and indicating that additional data or change in data can be made to the indicated symbol. The hook application code then sends a message to the display application code to display the net participant, facility or entity's amplifying data. The display application code retrieves the primary data and amplification data concerning the track or entity from the database and displays the 15 information at the correct screen location. The operator can then read the amplification data that relates to that specific symbol at the specific location. The cell phone operator can also select soft switches on the touch screen display to change the primary data and amplification data or to take actions 20 which could include making cellular phone calls, conference calls, 800 number calls, sending a free text message, operator selected preformatted messages, photographs or videos to the hooked symbol or to drop the symbol.

Each known net participant has a cellular phone number, IP 25 address and, if available, E-mail address that is stored in each participant's device database.

To use the present invention, the operator ("cellular phone one" or "phone one") starts the PDA/cellular phone device system by selecting the software which causes: a) the cellular 30 phone to be activated (if it has not already been activated), b) the GPS interface receiver to be established, c) a map of the geographic area where the operator is located and operator's own unit symbol to appear at the correct latitude and longitude on the map on the display, d) the locations of fixed 35 facilities such as restaurants, hotels, fire departments, police stations, and military barracks, that are part of the database to appear as symbols on the map, e) the device selected item read out area (which provides amplification information for the communications net participant or object that has been 40 touched on the display screen) to appear on the display, f) an insert area that contains various data including: the list of net participants, a list of messages to be read, an indication of what portion of the map is being displayed in major area and other information to appear on the display, and g) a row of 45 primary software created "soft switches" that are always present on the display to appear.

For point to call network units and fixed facilities, the application code detects the x, y display screen location of the symbol that is designated by the user's stylus and translates 50 the x, y coordinates to latitude and longitude and then: (1) searches the database to find the symbol at that location, (2) places a "hook" indicator (a circle, square or other shape) around the symbol, (3) displays any amplifying data and (4) obtains the symbol's associated phone number (or for VoIP 55 calls and IP address) from the database. Upon receiving a "call" designation from the soft switch, the operator's device application code causes the appropriate phone number or IP number to be called. Upon receiving an indication that the phone number is being called, the application code places a 60 box around the symbol (color, dashed or the like). When the call is connected, the box changes to indicate that the connection is made. When the other party hangs up, the box disappears.

As each of the network units reports its identity, location 65 and status to the other participants' devices, the received data is geo-referenced and filed in their databases that are acces-

8

sible by identity and by location. This data is then displayed. When a request for data is received, a location search is made and an indication of the closest track to the x, y position of the stylus is sent back to the display screen and software application code which causes another shape to appear around the unit and the data associated with the unit to be accessed. When the application code receives a soft switch command to place a phone call, the software uses the phone number (or IP address) associated with the unit to place the call or to send data.

If a device receives a digital message that a call is being received, the receiving unit's application code places a box or similar object around the transmitter symbol indicating who the call is from. When the call is answered, the application software changes the visual characteristics of the box. In a similar manner, when a phone receives a digital text message, photograph or video, a box appears around the transmitter's symbol indicating the transmitter of the message. The point to call network devices are participants and each one has a similar device with the same software for use as a total participant network. Other situations for calling facilities that are not part of the network are described below.

Fixed facilities' symbols selectively appear on the user's geo-referenced map display. The facility data can be accessed by identity and by location and type of facility. Device operators are provided the ability to call a facility (such as a restaurant, hotel, fire department, police station, military barracks, or other fixed entity) that appears on the map display. Each entity's phone numbers have been previously associated with that entity and stored in a facility database in the cell phone CPU that contains the identity, location and phone number of fixed entity locations that can be called. Data associated with the selected facility is obtained by the user using the stylus to touch at or near the facility map symbol's location. When a request for data is received by touching the stylus on a particular location, a location search is made and an indication of the closest facility to the x, y position is sent back to the display screen. The application code then causes a circle or other shape to appear around the facility symbol on the screen and its amplification data to appear. When the application code receives a soft switch (or hard switch) command to place a phone call, the software uses the phone number of the facility that was accessed to place the call to the facility. Thus, by using the stylus, the operator can touch a desired location on the screen such as "restaurant" and then use a soft or hard switch to initiate a telephone call directly to the restaurant without having to go to another type of display or without dialing the number.

The system shown in FIG. 1 can also initiate a telephone conference call for a small number of phones using stylus 14 contact to touch all the displayed symbols on display 16 that the initiator desires to conference and then selecting the "conference call" soft switch. The operator can also pre-establish a conference sub-net of selected participants that the operator desires to be able to rapidly call. The operator performs this task by touching the symbols or by selecting participants from a list or a matrix of the participant addresses and assigning the participants to a net software switch. When the operator desires to place a conference call to these participants, the operator simply touches the net soft switch associated with this group. Software is provided in the unit that mimics setting up a normal small conference call from "phone one" to each of the cellular phones or fixed facility phones the user had indicated by touching their symbols or selecting their sub-net soft switch on the screen. Once the first call is complete, the party will be automatically put on hold and other callers will be called or answered in sequence and put on hold until all the

parties are on line at which time the conference call will be established. As each participant is called, the phone will, optionally, announce that a conference call requested by cellular phone "one" is in progress. This will all be done by the

9

application software.

If a conference call is desired that includes more than a small number of phone users, the use of an 800 number conferencing service is required. The initiator or operator of cellular phone "one" would select the "conference 800" call software switch and then use the stylus or finger to touch the 10 cellular phone users' symbols or select the net of the units to whom the calls are to be placed. For example, 50 users are desired on a conference call. The cellular phone "one" would send out a SMS, internet or WiFi message to all of the identified cellular phones that cell "one" requests each cellular 15 phone participant to call an 800 number (the given number for a conference call) to conference with cellular phone "one". Each individual cellular phone user at that point in time would then be verbally notified that a conference call was requested. Automatically, or when the user selected the "accept" soft- 20 ware switch, the phone would then call the 800 number and enter its conference participant code.

Thus, the operator device is capable of initiating a cellular phone call by touch only, and initiating conference calls by touching the geo-referenced map symbols. Furthermore, 25 using a similar symbol touching technique cellular phone "one's" application code can send operator selected messages to cause a remote cellular phone to display and optionally announce emergency and other messages and to optionally elicit a response from the remote cellular phone.

The present cell phone/PDA/GPS device to create the communication network wherein all of the participants have the same communication device described herein also includes the ability of a specific operator device to provide polling in which other cellular phones using SMS, internet or WiFi 35 report periodically based on criteria such as time, speed, distance traveled, or a combination of a time, speed and distance traveled. The operator can manually poll any or all of the cell phone devices that are used by all of the participants in the communication network having the same device as 40 described herein for the invention. The receiving cellular phone application code responds to the polling device with the receiving cellular phone's location and status which could include battery level, GPS status, signal strength and entered track data. Optionally, the phone operators can set their 45 phones to report automatically, based on time or distance traveled intervals or another criteria.

The application software includes an application for designating geo-referenced symbols by "hooking" them. The application software determines that the stylus is pointed 50 close to or at the location of the symbol and puts a circle or other indication around the symbol indicating that amplification information concerning the hooked track is to be displayed and indicating that additional primary data and amplifying data is displayed. This indicates to the operator that a 55 change in the data can be made to the indicated symbol. The operator can read the primary and amplification data. The operator can then select soft switches to change the primary data and amplification data or to take other actions that may include making cellular phone calls, conference calls, 800 60 number calls, sending a free text message or preformatted message, sending photographs or video to the hook symbol, going to the symbol's web site, automatically filling in the symbol's E-mail address in an E-mail or dropping the symbol. In operation, the application code detects the screen 65 location of the touched point and determines if the distance from the touched point to the nearest symbol is indicative that

10

the operator wants to "hook" the track. If the distance meets the preset constraints, the software places a "hook" indicator such as circle or square or other shape around the symbol and searches the database to find the information associated with the symbol. As each of the participants' network units or devices reports its identity, location and status, the data is filed into a database in the operator's device that is accessible by symbol location and identity.

With respect to hooking a fixed facility such as a restaurant, hotel, fire department, police station, military barrack, or other fixed entity, a database is created as part of the map creation process (or entered by the operator) that is used for the display screen. Optionally, the fixed facility database is contained in an on-line server. The database contains the identity, location, phone number and, if available, the E-mail, IP and URL address of the fixed locations. When a request for data from the operator is received by touching the display screen with the stylus, a location search is made and an indication of the closest facility of the indicated type to the x, y position is sent back to the display screen application code. The application code can then use the data to place a call, to send an E-mail, or to access data from the facility's website.

Another important feature using the present device allows an operator to enter on the cell phone device's geo-referenced map, a new entity or event that can include an observed object, person fire, accident or other event occurring now at a specific geographical location. The observed entity could be an event such as a fire or an explosion that requires notification to other participants. To enter the new entity (new track), the operator points and touches the appropriate location on his cellular phone/PDA's display's geo-reference map with the stylus. The operator then selects a soft switch that indicates the type of observed entity or event indicating, as an example, that the new event is a tank or a fire which causes the symbol to appear on the map representing the tank or fire. The computer application software computes the latitude and longitude of the entity and transmits the newly added symbol and its location to the other participants on the cellular phone, WiFi or by other communication device. Each participant in the communication network who has the cellular phone device, in accordance with the invention, receives the transmission message that identifies the type of new entity or track with a symbol and the current latitude and longitude of the new entity (symbol) and displays the symbol at the correct location. Furthermore, if it is desired to amplify the symbol with text or a photograph or video, the operator can enter the text, take a photograph or video of the object and attach it to the appropriate symbol. When transmitted, that data appears when the receiving cellular phone(s) and the operator(s) hook (s) the symbol. To accomplish this, the receiving phone(s) application code store(s) the track (new entity) symbol, its latitude and longitude and any amplification text, photographs or video in its database. The display application software accesses the new track from the database and converts the latitude and longitude to the display's proper x, y location and displays the track and symbol and amplification data.

Another important feature using the present device is that it can allow completely anonymous phone calling or digital communication where neither party knows the other party's phone number or name but where at least one party knows the other party's location. Calls are placed by hooking the symbol whose identifier (not necessarily the name or phone number) is known and selecting either the call, conference call, send free text, preformatted messages, photographs or video soft switch. The call or digital message is then sent to the server. Since the server receives each network identifier (its symbol's number) along with its dynamic IP address when they sign on,

11 12

the server has the data necessary to send voice and digital data to that network participant. When the server receives a request to send voice or digital data to a symbol number and then an indication of the type of data to be sent VoIP for voice calls or conference calls, a digital message for free text, preformatted 5 messages, photographs, or video, the server routes the VoIP or digital data to the net participant to whom it is addressed. Since both the transmitter and the receiver of the communications send data to and receive the data from the server and not from the sender, neither party knows the phone number or 10 name of the other party. This same implementation can be utilized with standard (non-VoIP) voice calls. This is accomplished through the use of telephony interface cards at the server which permit the server to route the call to the addressee.

Referring now to FIG. 2, the same cellular phone/PDA 10 is shown with the soft switch matrix displayed at 16cc and **16**dd. The cellular phone/PDA is capable of an alternative method of contacting the participants. As shown in FIG. 2 and display 16cc, a plurality of squares is displayed having letters 20 and numbers, each square of which indicates a different participant such as "A1SQD." Also, on the right hand side, top line is a switch option called "call." The bottom line 16dd shows ZM IN, ZM OUT, CENT, GRAB and SWIT. Using this alternative telephone method, the initiator can touch indi- 25 vidual squares, each having a reference to a participant to initiate one call or a conference call with all of the parties. These can also be joined in a single NET 1 as shown. Subsequent phone calls with the particular designated parties or participants established with NET 1 can subsequently be 30 initiated just by touching NET 1 with the stylus or with a finger. The displayed information can be layered with a plurality of 'NETS" on a next layer for contacting groups of participants in each NET. This is used in lieu of the screen symbols for conference calls.

Referring now to FIG. 3, a flow chart is shown of the activities provided by the present invention and the methodology.

In addition, the operator of cellular phone "one" can address text messages, photographs and video for transmission to one or more net participants by either touching their symbols and selecting the appropriate soft switch or selecting the appropriate call net.

Another important feature of the present invention is that the operator of cellular phone "one" can, by touching a switch on the display, send a digital message to all the PDA/cellular phones in the communications net or to designated cellular phone(s), represented by their symbols on the geographic displays, an emergency or other preformatted message which may or may not require a response and may or may not cause a verbal announcement, cause the phone to vibrate or buzz, or cause another alert. When received, the software in the remote cellular phone causes the remote cellular phone to initiate an audio or another alert to the cellular phone user that there is an emergency (or another message) and may or may not indicate that he should call the initiator immediately. This is accomplished by the message sent from cellular phone "one" to the software in the remote cellular phone(s).

In summary, the present invention provides for expeditious data exchange and cellular phone and WiFi calls to one or 60 more users by merely touching the display screen location of a remote cellular phone user's symbol to initiate the call. The same pointing at geo-referenced symbols method is used to send free text, pre-formatted messages, photographs and video. Another method of establishing communications is to 65 assign the participating user units to a net and then select the net to establish the call. Other features include conference

calling by using a stylus or finger to sequentially hook symbols or select nets, to rapidly send emergency and other preformatted messages, and to cause remote phones to annunciate various pre-established messages, execute text to speech software, increase its volume level, vibrate, and show preentered photographs or videos. Furthermore, the cell phone/PDA operator can access fixed facilities' web sites or send them E-mail messages by using the same concept of hooking their geo-referenced map symbols and then using soft switches to automatically go to their web site or to automatically fill in their E-mail address in an e-mail.

Referring now to FIG. 4, another embodiment of the invention permits automatic shifting between voice communications and high speed cellular internet communications across the communication network of cellular phone/PDA devices. In FIG. 4, information flow associated with the communications cellular phone system of the present invention is shown. The satellites 40 provide global positioning system (GPS) signals to each of the cellular phones 42, 44, 46 and 48 distributed throughout the communication area. Each of the cellular phones 42, 44, 46 and 48 automatically transmit each location data over the internet communications 52 that is provided by the cellular phone company 50. The data is sent to the command communication website server 54 which subsequently retransmits the data to all other common communication units or if specifically addressed data is received to the addressed specific communication unit such as cellular phones 42, 44, 46 and 48. If one of the cellular phone units, such as cellular phone 42 operator makes a voice call or is called, the system cellular phone automatically drops out of high speed data communications and goes to a slower Short Message Standard (SMS) communications mode which can be used simultaneously with voice communications. When this occurs, the other communication units 44, 46 and 48 detect the fact and transmit data to the communication unit that is in SMS using the SMS technology. When the voice communication is ended at cellular phone 42, then the cell phone again begins transmitting over the internet. The other cellular phones 44, 46 and 48 detect this fact and stop transmitting to it in SMS mode. Thus, automatic shifting from GPRS/EDGE/CDMA/1XEVDO/ to SMS occurs when the voice communication phone is in use and automatic shifting back to GPRS/EDGE/CDMA/1XEVDO occurs upon completion of the voice communication call. Another method for shifting between high speed and internet is as follows: If one of the cellular phone units, such as cellular phone 42 operator makes a voice call or is called, the system cellular phone automatically drops out of high speed data communications and goes to a SMS communications mode which can be used simultaneously with voice communications. However, instead of sending the SMS messages to the other participants, the phone transmits its data in SMS to the Server which then retransmits the data in GPRS/Edge/1XEVDO or WiFi to all the other participants. Location, status and text data from the other participants is then retransmitted by the Server to the phone in SMS. Photographs and Video Clip data is held by the Server for retransmission to the phone in SMS until the phone call is completed and the phone has returned to high speed GPRS/1XEVDO. When the phone call is completed, the phone returns to GPRS/EDGE/1XEVDO and that fact is detected by the Server which then reverts to high speed GPRS/EDGE/1XEVDO communications with the phone.

Referring now to FIG. 5, which depicts a process flow diagram of the present invention transfer protocol that allows photographs and video transfer across multiple cellular carriers between smart phones and personal computers (PCs). In contrast to existing multimedia services offered by cellular

carriers, the present invention functions across different cellular carriers including carriers using CDMA, GSM and WiFi. The primary key to the invention lies in the command Server which includes a collection of software applications

and publicly visible IP addresses that can be accessed by 5

13

internet capable mobile devices.

Specifically, the present invention transfer is comprised of several key concepts which include the use of a globally accessible Server to facilitate the transfer of photographs and video clips. The specification of a protocol uses distinct control and data ports that are capable of supporting multiple simultaneous transfers. This protocol can be implemented on a variety of intelligent phones and personal computers. As shown in FIG. 5, the hand set is sending to the command Server that listens for connect port **81**. The data is sent in one 15 K-blocks (which can be throttled if needed) and then closes the socket to indicate EOF. At the Server, available status is made on port 80 with notification via UL. User picks download in UL. The Server sends out the new command center file available message with available status on port 80. The hand 20 set that is receiving provides notification back to the Server via UL and the user picks download in UL. The hand set receiving then connects to port 81. Once the hand set receiving is prepared, the data is sent in one K-blocks from the Server to the hand set receiving which is closed out to indicate 25

By the use of this protocol shown in FIG. 5, photographs, video clips, and video can be transferred between cell phones operated by different cell phone vendors in either CDMA, GSM or a combination of the two.

Referring now to FIG. **6**, a flow chart shows how the device operator can switch between voice and SMS and high speed internet data transfer. As shown in FIG. **6**, the operator turns the cellular phone on and selects the application software. The application software puts the telephone in a digital data 35 transfer mode. The software operates exchanging position, tracks, text, photographs and video clips. The operator then decides to make a voice telephone call either by hooking a participant unit cellular phones' symbol or a fixed facility symbol and selecting the voice call, conference call, or 800 40 call soft switch. The application software then puts the phone in voice and SMS mode for that voice call. When the voice transmission is finished, the operator hangs the telephone up. The application software detects the hang up and automatically shifts back to the digital data transfer mode.

The invention also allows an operator to assign text, photographs, or a video to a map symbol that is displayed on the navigation map display. When the operator enters text, takes a photograph or takes a video clip, the operator can then touch the map symbol with which the operator wants to associate 50 the map symbol with the text, photograph or video clip. A soft switch is selected to associate the text, photograph or video. The symbol to which the text, photograph or video clips are assigned, can be moving or stationary. Subsequently, if any other users on the cellular phone network or the operator 55 touches i.e. "hooks" the symbol, the text, photograph or video will be displayed. This is a very important feature in that instead of a participant looking at what would be a symbolic display of, for example, an enemy tank, the sending and receiving participants are able to hook the symbol, view an 60 actual photograph or video of the stationary or moving tank.

The touch screen display includes an activating switch that, when touched, causes a matrix of software driven layered switches (soft switches) to appear on the cellular phone/PDA display in place of the readout and insert areas. Some of these 65 soft switches, when touched, cause the cell phone/PDA device's functions to occur. Other soft switches cause yet

14

another layer of soft switches to appear, replacing those that were previously displayed. The operator is provided a visual display indicating the specific layer in use from the layers of switches, and is able to return to the previous layer or to cause the layered switches to disappear such that only the basic switches remain. The operator can also use the cell phone's hardware pointing device (navigation pad) to control the soft switches. By using these soft switches and hard switches that are part of the cellular phone, the operator can activate different maps, change map scales, select which fixed entities are desired to be displayed, display the information concerning the symbol the operator has touched, initiate phone voice calls, send messages (free text, preformatted messages, photographs and videos), enter symbols and information representative of other entities, view the locations and statuses of the other communications net participants, establish conference calls, and pre-establish conference sub-nets. The conference sub-nets, when activated, cause all the phone numbers that are specified to be conferenced for voice, text, preformatted messages, photograph and video communications, and transmit messages to remote phones which cause the remote phones to make calls, verbal announcements, vibrate, increase sound levels and other functions. The operator can also use the soft switches to cause the cell phone/PDA or if embodied in a cellular or WiFi enabled personal computer or tablet to automatically access "hooked" fixed facility web sites and to automatically addresses E-mails.

The soft switch application software causes a visual display of a matrix such as five across by six up (or other matrix) in which switch names are placed on the cellular PDA display. The soft switch application software knows the touch screen location of each of the switches in the matrix and the software routines that will be activated upon touching the switch.

The bottom row of soft switches displayed on the touch screen remains visually fixed. These switches concern the functions that are the most often used. One of the switches causes a matrix of other soft switches to appear above the visually fixed soft switches. These switches are function soft switches, the activation of any one of which causes a different matrix of soft switches to appear, which are known as the action soft switches. When the action soft switches appear, the function soft switch which causes the action soft switches to appear as a label in the lower left (or some other standard location) indicating to the operator the types of actions the operator can take. When the operator selects an action soft switch, the appropriate application software to accomplish the action is activated.

Upon receiving a soft switch activation message, the soft-ware accesses the appropriate task execution software which accomplishes the required tasks including enter track data, enter track amplification data, send alpha/numeric messages, send photographs, send video, read messages, select map types, voice call, conference call, 800 call, set up selections, display actions, polling units, set up nets such as groups of users or locations, and drop track. By providing a matrix and layers of soft switches which are easily manipulated by a stylus, each cell phone device in the communication network is extremely efficient in accessing and coordinating the appropriate application program for the device to perform.

There are several ways that the network can be established including: A. POLLING—To initialize the communications net, the cellular phone "one" operator selects, from a list, the other users (or all of them), that the operator desires to be part of the communications net. The system then polls the selected phones to activate and become part of the communications net. The selected phones then transmit their GPS positions to all the other phones in the established net. Through interac-

15

tion with one or more other software enabled cellular phones, symbols are generated on the operators' displays based on the participants' latitude and longitude that is exchanged between the cellular phones. The transmission of this information is based on an algorithm which considers time and/or 5 movement or which is based upon a polling request. B. ALL REPORT—Another method is for each cell phone sets its own transmission times based on time or movement. When its initial message is received by the other participants they report their location and any tracks that they have entered. C. 10 GROUP—IDENTIFIER BY TYPE—Another method is for each phone to have a group identification that is transmitted in its initial message which relates it to a particular group who are their own net, only those with that identifier (i.e. singles, coin collectors, etc.) are permitted to join that net, and yet 15 another method. D. FRIENDS AND FAMILY—Only those who are in an approved list maintained by the server or internal to each phone are permitted to join that network.

Each of the communication net symbols on the display represents a different cellular phone remote from cellular 20 phone "one". Each of the cellular phones has the phone numbers of all the phones that it expects to exchange data with in its database. If additional phones desire to join the net, they transmit their designation and their phone number in their initial message so that they can be identified. The net can be 25 set to either enable these phones to join the net or to be set to exclude them from the net. Each of the phones also has in its database the pre-established phone numbers and, if available, the E-mail addresses and URLs for the fixed locations buildings, facilities, military bases, and other desired locations that 30 can be called or accessed in its database. The touch screen provided with the LCD display in the cellular phone includes x, y coordinates that are correlated with the geo-referenced map on the cellular phone display and the geographic location of the fixed sites and the cellular phones participants in the 35 communications net. The operator of each cellular phone can enter an object of interest by touching the display screen at the object's location on the display screen map. The operator can then assign each object a category (car, person, tank, accident, or other category) and amplification data including: text, pho-40 tographs and video. The latitude and longitude of each object along with its category and other information is then sent on the communications network. Because each of the receiving cellular phone/PDA devices has software that automatically converts the received data to the correct map location, the 45 transmitted symbols appear at the correct location without operator intervention and their category information and amplification information is available by touching the symbol on the display screen.

Each cellular phone/PDA/GPS device contains the com- 50 munications hardware, along with the circuitry and software, to initiate a voice telephone call or transmit data messages, photographs, or videos by an operator touching the display screen with a stylus or finger at the symbol location displayed on the screen of the desired cell phone net participant to be 55 called and then selecting the: "call", "free text", "preformatted message", "photograph" or "video" software switch on the display touch screen. The call is then done automatically. Each of the fixed facilities can be called in a similar manner; however, since the fixed facilities' phones are not one of the 60 participating phone devices, they do not have the application code; thus "free text", "preformatted message", "photograph" or "video" type data can not be sent. The software will then cause the participant cellular phone to call or send the appropriate data to the specific phone number represented by 65 the symbol on the screen. This action alleviates completely the steps of looking up a phone number and manually entering

the phone number required or IP address to make a cellular phone call or a WiFi, VoIP call, or to send data. Each cell phone device can use software for VoIP calls. The database in the cellular phone/PDA devices includes the phone numbers of each the other network participant symbols and, if available, the E-mail and URL address of each fixed facility on the map. The fixed facility E-mail and URL address enable the operator to go to the fixed facilities' web sites or to automatically fill in their E-mail addresses by hooking the fixed site's symbol and selecting the appropriate soft switch.

16

Using the application software on a cellular phone/PDA device in accordance with the present invention, permits the cellular phone user to enter and transmit data such as text, preformatted messages, photographs or video clips associated with a symbol on the geo-referenced map display and to then transmit the data associated with the symbol to other net participants automatically or by hooking the symbol and selecting transmit. The touch screen symbol can be stationary or moving. When the receiving participant points at the symbol, the symbol is hooked. The associated data (text, preformatted message, photographs or video clips) that was entered by the participant and transmitted will appear on a portion or on the whole touch screen of the receiving participant's display. Thus, if the operator of a cell phone device were in a situation where the operator observed a moving target, such as a tank, that had a symbol representative of a target on the operator screen, the operator can enter the text data or preformatted message, a photograph of the actual tank that is being observed, or a video clip of the actual tank that is being observed, which can all be transmitted rapidly to a recipient participant involved in the entire situation. Thus, when the recipient participant hooks the symbol he can view the free text, preformatted message, photograph or video of the actual target that has been sent by the operator. In this case, the cell phone software program generates the moving symbol and stores the entered text message or has a selected preformatted message stored, or captures and stores the photographs or video clips using a video camera into memory, and associates the entered data with the symbol that was generated that represents the moving target and transmits the data to one or more participants of the net.

Another embodiment of the present invention provides for full transfer of photographs, video clips, and high speed data between any cellular phone vendors in either CDMA, GSM, WiFi or a combination of these. Thus, using the present invention, photographs and video can be transferred across multiple cellular carriers between smart phones and personal computers. This is accomplished by a command server which includes a collection of machines publicly visible IP addresses which can be accessed by internet capable mobile devices. With the present invention, there is the use of a globally accessible server to facilitate the transfer of photographs and video clips between each of the cellular phone users in the communication network. The method and communication network also includes the specification of a protocol that uses distinct control and data ports capable of supporting multiple simultaneous transfers. This protocol is implemented on a variety of intelligent phones and personal computers.

The software in the present communication device can provide to each user participating with the same software the ability to make voice calls and to send free text, operator selected messages, photographs, and video to all other user participants within a certain distance to be determined by the initiator of the call or data. The software enables the initiating user to indicate the farthest recipient within the geographical range to whom the initiating user wants to call, and to send

17

free text, operator selected preformatted messages, photographs or video, by selecting an appropriate soft switch. The initiating user's device will then call or transmit the free text, operator selected preformatted message, photograph or video to the farthest participant in the selected range and all other 5 participants that are closer. This is similar to the conference voice call discussed above but, in this particular software managed situation, all of the parties, from the farthest to the nearest, within that range can receive the same call, free text message, operator selected preformatted message, photo- 10 graph and video. Again, this action is a tremendous time saver for the initiating user to get these types of messages to all of the participants within a given range. The operator "hooks" a track that is stationary or moving and selects a soft switch specifying that the operator desires to conference call all 15 network participants or to send free text, operator selected preformatted message, photographs or video that are the same distance or closer than the range of the hooked track. The application software then searches the geo-referenced database (containing latitude and longitude or similar positional 20 attribute) for all the network participants within the specified range. Upon finding them, the application software: (1) sends a message to the cell phone to call or conference call the identified participant's network, (If the number of participants is greater than the number permitted by the phone's 25 conferencing capability, the application software instructs the phone to make a call to an 800 number and cause all of the other phones to make a similar call and to automatically enter their participant code) or (2) sends a free text message, an operator selected preformatted message, a photograph or a 30 video to all the participants within the specified range. The operator can use the same technique to call fixed facilities, but because the fixed facilities do not have the application software, the operator can not send text, preformatted messages, photographs or videos.

The present invention includes other features for a cellular telephone communications device that provides calling all other people on the communications network that have a specific attribute such as all of the squad leaders within a company or all the company commanders within a battalion. 40 Also, the device will notify one or more of the users within a variable range when someone else using the software approaches and provides for automatic calling within a specified range of a particular user's cellular phone.

Another feature of the present communication system is to 45 enable the cellular user to use a Smart Phone or a personal computer such as a desktop, a laptop computer or a tablet computer that is equipped with a CDMA, GSM cellular telephone or WiFi card, a global positioning system (GPS) receiver and a digital camera that can accomplish all of the 50 communications that have been described in the application. Thus, the PDA software provided for this communication system is readily adaptable into a personal computer, laptop computer or tablet along with a digital camera and GPS once the cellular telephone or WiFi card is installed in the system. 55 The present communication system is also capable, based on the software and hardware of the present invention, of using wireless communications (WiFi) in lieu of the cellular communications that have been described herein. The system can use an integrated wireless capability or a wireless card that 60 allows transmission and receipt of wireless communications in accordance with any conventional wireless protocol.

Automatic Identification System (AIS) is a communication system that is used between ships for identifying the name, position, heading, and velocity of nearby ships. Each 65 ship has its own display and receives constant signals from all the other ships within line of sight. The AIS constantly trans-

mits updates of each ship's current location, course and speed and other pertinent data within line of sight. The AIS reports are transmitted at a variable rate. With the software in the present communication system, a remote server receives, processes and correlates the AIS reports. The server then transmits the AIS ship locations to all the cellular/PDA phones (and PC/tablets) that are network participants. Each network participant is able to view the location of all of the other participants in the net and to also view the location of the AIS equipped ships on each participant's display. Furthermore, the AIS data content (ship name and other data) of the AIS reports are displayed when the AIS symbol is hooked on a participant's cell phone/PDA display. The server application code receives the AIS digital message, determines the type of AIS message and processes the data appropriately, storing the AIS data into a database organized by MMSI number or another unique AIS ship identification means. The AIS data is then retrieved from the database using one of several criteria including the: (a) time since last transmitted and (b) speed of the ship. The retrieved AIS data is then processed by a transmission routine which transforms the data into a format that is compatible with the cellular Internet transmission means or SMS or WiFi and outputs the data to net participant cellular phones/PDA (and PC/Tablets) at the correct latitude and longitude. The AIS cellular phone/PDA (and PC/Tablet) application software receives the server formatted AIS data and stores the data in a database. The data associated with each AIS track is then retrieved from the database by the cell phone device display software and transformed to the correct x, y display position to correspond to each track's latitude and longitude. When the track is hooked, the AIS amplification data, or a subset of it, is displayed to the user.

18

The software program contained in the cellular phone/PDA using the present invention can generate a display indication 35 of a symbol's speed and heading. The speed and heading are indicated by a small line attached to the symbol. The line's direction indicates the symbol's heading and line's length indicates the symbol's speed. When the cell phone generated symbol's speed and heading are transmitted, the receiving participant's device also displays the speed and heading in the same manner. When the user notices that a track has moved from the location that the user first observed, the user can point by touch screen to the display location where the track has moved to on his cellular/PDA display. This new location data is then converted to the appropriate latitude and longitude. The velocity generation application code then computes the speed and heading, taking into account the time interval between the time the track's previous position was entered and the time that the new location was entered. The velocity generation application code then passes the velocity (heading and speed) to the display generation code. When the display generation application code receives the speed and heading data from the velocity generation application code, the display generation code attaches a line to the symbol. The line's length indicates the track's speed and the line's direction indicates the track's heading.

The cell phone/PDA map display in accordance with the map software program provides a geophysical display using a geo-referenced map, chart, satellite image or aerial photograph of a given area or location. This map can be based upon and received from the worldwide databases that are maintained by the U.S. Government and others and loaded on to the cellular phone CPU database. The cell phone device application software, however, can also provide to a user the ability to request a specific geo-referenced map or chart, aerial photograph or satellite image from a remote image server by pointing at the specific location desired for the map, aerial

19

photograph or satellite image and selecting the display range and selecting the request image soft switch. Activation of the request soft switch causes a message to be sent to the remote server that causes a geo-referenced chart, map, aerial photograph or satellite image to be sent to the requestor's cell 5 phone/PDA device where the image is geo-referenced and displayed.

Another feature of the present communication system is to provide to each user's cell phone device geographic notification on the touch screen display of the location of the sender 10 of a message to the user. With two or more of the cellular phone/PDA devices in the network, a message recipient can hear an audible voice alert, or beep or tone that alerts the participating recipient to an incoming message. The additional feature is that a different color box or circle will appear 15 around the symbol on the geographic display that represents the participating sender of the incoming message. Thus, the participating recipient is immediately apprised of the specific location and, thus the importance, of the party who is calling or transmitting a message to the recipient. In the case of a 20 battle or disaster scenario, it could be that the geographical display screen will shown an incoming message from someone who is right along the forward battle line or in an area of a recent disaster. This will tell the recipient to immediately read the message. The recipient can either select the read 25 message soft switch and then select the message from the message list or hook the indicated symbol to display the message whether it is text, preformatted message, photographs, or video. Thus, the internal software program in each cell phone device can alert the recipient that a message is 30 being received and the location of the sender on the display by a color or other type of indicia surrounding the symbol that represents the message sender for rapid notification to the recipient of who is sending the message.

The present cell phone/PDA devices used in the communication network system can provide to each user the ability to cause a text, preformatted message, photograph, video clip and high speed data to be "pushed" to other participants' cell phones so that the data sent does not have to go to a website to pull off the photograph or video clips.

Another feature of the cell phone device used in the present communication system is to provide to each user the ability to go to a fixed faculty's web site (such as a restaurant) by hooking fixed site's symbol (and thus obtaining its URL) and selecting a soft switch that requests that specific web site. This 45 same feature can be used to automatically address E-mails by hooking a fixed site's symbol (and thus obtaining their E-mail address) and selecting a soft switch that requests an E-mail form and automatically fills in the fixed site's E-mail address.

The software with the present communication system provides to each user the ability to cause an alert (verbal, vibrate, or text) to emanate from or appear on the user's display when another user is within a predetermined distance of the user and, furthermore, to be able to automatically call that individual by selecting the call soft switch.

The cellular phone/PDA device can provide the user with the ability to select a soft switch that causes the cell phone to call the geographically nearest member of a particular group of members such as the nearest police station, fire station, EMT unit, or other member that can include services such as 60 plumbers or electricians. The software can be set up so that the cellular phone/PDA's software searches the database to find the nearest geographic police station or fire station, or whatever the selected group is, and would automatically make a cell phone call to that number. The GPS application 65 software is constantly updating the database with the GPS location of the user which is then superimposed on the display

20

map. Fixed facility locations of interest to the user are stored in a non-network facility location database along with their phone numbers and, if available, their email addresses and their URLs. These groups and member locations include types of facilities such as: restaurants, police stations, fire departments, gas stations, restaurants and military installations. When the operator selects to call the nearest facility location, the position application software searches the nonnetwork fixed facility database to determine the closest facility of the type that the operator has selected. When the nearest facility of interest is found, the position application software sends a message containing the nearest facility's phone number, (and if available URL and E-mail address) to the application software. When the application software receives the nearest location of interest, the software places a modifier around the symbol that is associated with the location of interest and places the call or if different soft switches have been selected goes to their web site or automatically addresses an E-mail.

The data link application software is constantly updating the database with information concerning the position, identity and status information of the network participants' devices in each cell phone CPU transmitting on the cellular, WiFi or SMS network. Tracks that are entered are being constantly repositioned as the tracks move. The database is constantly sending the cell phone device and track data to the display database so that the display can be updated with new device positions and track data received from the participants in the network. The position application software computes the range from the user to the other network participants and tracks "entities" received from the other net participants and creates an alert if the range is less than the range specified by the operator as the notification range. When the alert is created, the alert is sent to the display and voice announcement application code. When the display application code receives the alert, the code then posts a visual indication such as a modifier around or near the cell phone device or track that is within range. When the voice alert application code receives the alert, the code either accesses a prerecorded voice announcement or utilizes a speech to text software application to make a verbal announcement.

The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made there from within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

- 1. A method of providing a PDA cellular phone communication network for designating participating users displayed symbolically on a geographical map, each user having a similarly equipped cellular phone that includes CPU, GPS navigational system symbol generator and a touch screen display comprising the steps of:
 - selecting screen icons for establishing rapid voice initiation and communication to the users of the cellular telephone PDA/GPS network system using a touch screen; transmitting high speed internet selected text messages, photographs and video to other cellular phone users by touching each user's geo-located symbol on the touch
 - establishing a network of cellular phone PDA devices for said users having the same operating software that permits either voice communication and low speed communication or high speed internet communications;
 - communicating by icon selection with a remote server for receiving and transmitting over the internet high speed

21

- internet communications or low speed communications to each of the user's cellular phones in the cellular phone network:
- selecting symbols on said display touch screen representing other participants having similar cellular phones 5 forming a communication network;
- selecting by screen icon application software in each cell phone or a server for automatic triggering of stored selectable individual criteria and subject type and range for netting of said cell phone in a like group;
- selecting icons for communicating with said remote server with the selectable criteria and subject matter and cell phone numbers and IP addresses of the selected user's having the criteria and subject matter;
- selecting application software in each cell phone or server for utilizing a list of approved net participants that can join a net;
- selecting screen icons for communicating a position report and status information from one among all of the other users equipped with cellular phone/PDA/GPS system and its associated software and displaying the user's symbol on the map display at the correct location;
- selecting a screen icon for transmitting rapid voice call initiation to the users of the cellular phone/PDA/GPS navigational system using a touch screen and the users' symbols; and
- selecting a screen icon for transmitting rapid transmission of free, operator selected text messages, photographs and video to another cellular phone using the touch 30 screen.
- 2. A communication system as in claim 1, including: displaying the symbol's velocity as a line emanating from the symbol whose direction is representative of heading and whose length is representative of speed that is seen by the 35 other participants in the communication networks as in claim 1 when the symbol's velocity is transmitted to them.
- 3. A method for providing a cellular phone communication networked for designated participating users, each having a similarly equipped cellular PDA phone that includes a CPU, 40 a GPS navigational system, and a touch screen display comprising:
 - Selectively activating one or more touch screen icons for activating transmission of selectively polling and status information from one user among all of the other users equipped with said cellular phones and its associated software;
 - activating a touch screen icon for automatically reporting position and status to a server for appropriate transmission or directly to one or more other participant users' cell PDA phones in said communication network based on predetermining condition;
 - activating a touch screen icon for reporting position and status based on a predetermined condition that includes distance traveled since last report; and
 - selecting a touch screen icon establishing voice conference calls and sending free text, operator selected messages, photographs, and video to all other network participants within a distance determined by the initiator of the voice call, free text, operator selected messages, photographs, and video.
- **4**. A method for providing a communication network for designated participating users as in claim **3**, wherein:
 - selecting an icon for creating a predetermined condition 65 having specific users automatically reporting at specific times and/or distances traveled by the reporting user.

22

- **5**. A method for providing a cellular phone communication network for designated participating users as in claim **3**, wherein:
 - transmitting an alert automatically activated by previously entered information, or obtained from a database about fixed facilities or entered tracks that reach a minimum predetermined distance from a cellular phone user.
- 6. A method for providing cellular phone communication network for designated participating users, each having a similarly equipped cellular phone that includes a CPU, a GPS navigational system, and a touch screen display comprising:

generating a map of a geographical display on each user's cell phone display screen;

- selectively polling position and status information from one participating user between one or more of the other participant users equipped with similarly configured cellular phones and its associated software;
- providing rapid voice call initiation from one participating cell phone user between and among the participating users of the cellular phone network system using a touch screen:
- providing one or more symbols on said map displayed on touch screen representing other user participants, each user having a similar cell phone forming the communication network;
- calling one or more participant users by touching the screen symbol representing another participant user on the touch screen and touching a call switch;
- adding a new track symbol representing an object, person or event, fixed or mobile, to the geographical display by touching the geographical display at the location of the new track to be added;
- assigning a category to the new track to be added on the geographical display screen, said category being an object, person or event;
- selecting an appropriate category switch for identifying the new track selected;
- selectively attaching text, photographs video clips, voice recording, Email address and URL address to the track so that when the user receiver of the track touches the symbol associated with the track, the user receives this information; and
- sending to one or more of the other participant users of the cellular telephone network information concerning the new track including the new track's location and category to the other participant users.
- 7. A method for providing a cellular phone communication network as in claim 6 including the additional steps:
 - displaying tracks symbols received from other network participants on the ceil phone's touch display screen at the correct geographic location superimposed on a geographic map mid further display the identity of the symbol and the text of the transmitted location and other received data when the track symbol is touched or selected by a different means.
- **8**. A method for providing a cellular phone communication network as in claim **6** including the additional steps of:
 - amplifying an entered track symbol on a user's touch screen display with free text, preformatted messages, photographs or video or other digital files and transmitting the data to the other participants either directly or through a Server so that each of the participating network user's can receive and view the information associated with the track symbol by touching the geographic located map symbol.
- **9**. A method for providing a cellular phone communication network for designated participating users, each user having

23

a similarly equipped cellular phone that includes a CPU, GPS navigational system, an interact message transmitter and receiver and a touch screen display comprising:

- accessing a database in each cell phone that includes a geographical map of a predetermined area for user viewing on the touch screen display;
- accessing an application program in each cell phone for generating one or more symbols representative of one or more participating users, each of whom have a similarly equipped cellular phone;
- accessing a database in each cell phone that includes cellular telephone numbers of each of the participating users having similarly equipped cellular phones, said database including the generation of one or more symbols associated with a particular participating user;
- calling a participating user by touching the symbol on the map display and touching a call switch;
- connecting each of the cell phones to an internet connection:
- exchanging IP addresses using SMS or other digital message format between and among each of the network participant users so that communications between participants is established via IP or transmission of a network participant's IP address to a server which then transmits data to other network participants using the IP 25 address previously.
- 10. A method for providing a cellular phone communication network as in claim 9 comprising the additional steps of: pushing photographs or video clips files between and among each of the cellular telephone participants users across multiple cellular carriers and between smart phone and PCs.
- 11. A method for providing a cellular phone communication network as in claim 9 comprising the additional steps of: enabling data exchange between network participants who have common cellular phone numbers in their phone's or PC's database.
- 12. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: adding a new cell phone participant into a communication network of participating users by having the new cell phone participant transmit an identifier, a cell phone number and an IP address in an initial message to other participant users or to a server for retransmission of the data other network participants.

24

- 13. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: sending each participating user directly or to a server for retransmission the geographic location of the sender of a message.
- 14. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: automatically calling the nearest fixed location from a particular group including: police stations, fire stations, or EMTs or other fixed locations by one or more of the cellular phone network participants.
- 15. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: entering on a user's touch display screen a new track by touching the display screen at the correct map location and selecting the type of symbol to be displayed, causing that symbol identifier to be transmitted to the other network participants either directly or through a server and as the track's location moves, sending new location data to the other participants relative to the new track so that each of the participating user's display is updated with the new track's position.
- 16. A method of providing a cellular phone communication network for designated participating users, each having a similarly equipped PDA cellular phone that includes a CPU, a GPS navigational system and a touch screen display comprising:
 - selecting an icon that establishes rapid voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch screen;
 - transmitting high speed internet rapid transmission of operator selected text messages, photographs, voice recordings and video to other cellular phone users using the touch screen;
 - accessing a server for establishing high speed internet communications between said cellular phone network users and said server; and
 - generating at the server networks enabling anonymous voice and data communications so that neither the originator of the phone call or data transmission nor the receiver of the phone call or data transmission need to know the other's phone number, name or other identifier other than a symbol location on a map.

* * * * *

Exhibit C

US008213970B2

(12) United States Patent

Beyer (45) **Date of Patent:**

(10) Patent No.: US 8,213,970 B2 (45) Date of Patent: Jul. 3, 2012

(54) METHOD OF UTILIZING FORCED ALERTS FOR INTERACTIVE REMOTE COMMUNICATIONS

(75) Inventor: Malcolm K. Beyer, Jupiter Inlet Colony,

FL (US)

(73) Assignee: Advanced Ground Information

Systems, Inc., Jupiter, FL (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 367 days.

(21) Appl. No.: 12/324,122

(22) Filed: **Nov. 26, 2008**

(65) Prior Publication Data

US 2009/0075685 A1 Mar. 19, 2009

Related U.S. Application Data

- (63) Continuation-in-part of application No. 11/612,830, filed on Dec. 19, 2006, which is a continuation-in-part of application No. 11/308,648, filed on Apr. 17, 2006, now Pat. No. 7,630,724, which is a continuation-in-part of application No. 10/711,490, filed on Sep. 21, 2004, now Pat. No. 7,031,728.
- (51) **Int. Cl. H04W 4/00** (2009.01)
- (52) **U.S. Cl.** **455/466**; 455/88; 455/404.2; 455/412.1; 455/412.2; 455/414.4; 455/415; 455/416; 455/418; 455/419; 455/420; 455/456.1; 455/456.3; 455/457; 455/458; 455/463; 455/500; 455/517; 455/518; 455/519; 455/556.2; 701/213; 701/482

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

7,031,728 B2	4/2006	Beyer, Jr.
2002/0061762 A1*	5/2002	Maggenti et al 455/519
2004/0082352 A1*	4/2004	Keating et al 455/519
2004/0192365 A1*	9/2004	Dalton et al 455/517
2005/0241026 A1*	10/2005	Esler et al D24/100
2006/0199612 A1	9/2006	Beyer, Jr. et al.
2008/0076410 A1	3/2008	Beyer

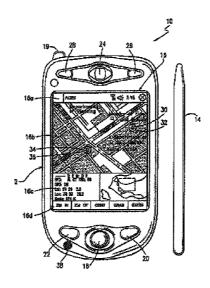
* cited by examiner

Primary Examiner — Nick Corsaro
Assistant Examiner — Amanuel Lebassi
(74) Attorney, Agent, or Firm — Malin Haley Dimaggio
Bowen & Lhota, P.A.

(57) ABSTRACT

The system and method having a specialized software application on a personal computer or a PDA/cell phone that that enables a participant to force an automatic acknowledgement and a manual response to a text or voice message from other participants within the same network. Each participant's PDA/cell phone includes a force message alert software application program for both creating and processing these forced message alerts. The system and method enabled by the force message alert software application program provides the ability to (a) allow an operator to create and transmit a forced message alert from a sender PDA/cell phone to one or more recipient PCs and PDA/cell phones within the communication network; (b) automatically transmit an acknowledgement of receipt to the sender PDA cell phone upon the receipt of the forced message alert; (c) periodically resend the message to the recipient PCs and PDA/cell phones that have not sent an acknowledgement; (d) provide an indication of which recipient PCs and PDA/cell phones have acknowledged the forced message alert; (e) provide a manual response list on the display of the recipient PC and PDA/cell phone's display that can only be cleared by manually transmitting a response; and (f) provide an indication on the sender PDA/ cell phone of the status and content the manual responses.

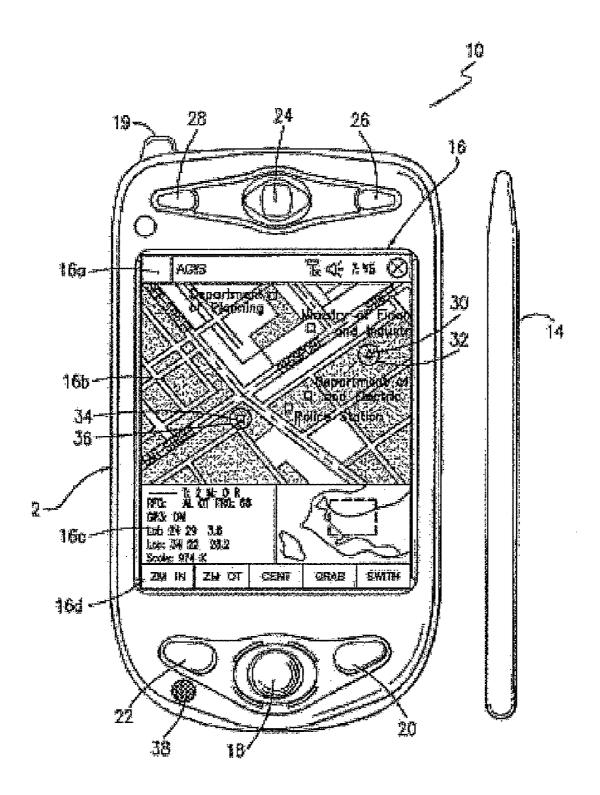
13 Claims, 6 Drawing Sheets



Jul. 3, 2012

Sheet 1 of 6

US 8,213,970 B2

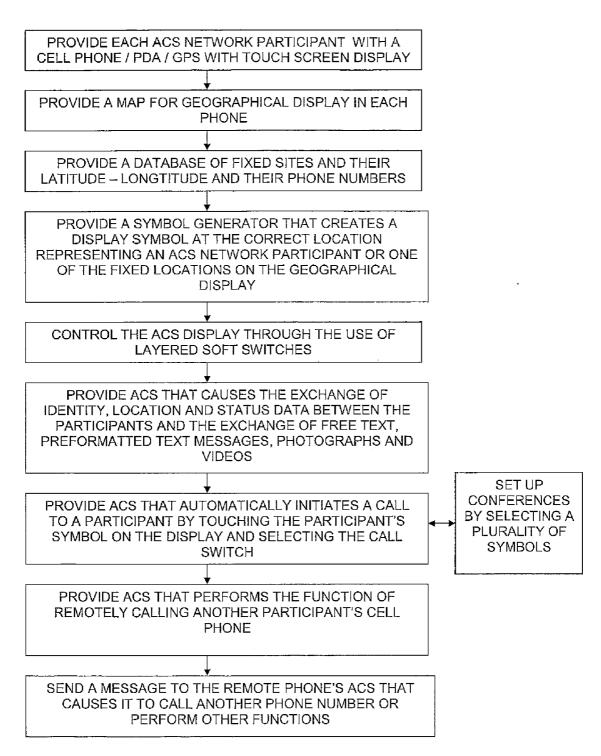


<u>Fig 1a</u>

Jul. 3, 2012

Sheet 2 of 6

US 8,213,970 B2



<u>Fig 1b</u>

Jul. 3, 2012

Sheet 3 of 6

US 8,213,970 B2





The Forced Messaging Alert Software is installed on a plurality of cell phones, integrated PDA/cell phones and PCs, creating a communication network

One or more default response lists for the communication network are created

The contact and identifying information for each cell phone, integrated PDA/cell phone and PC that is a member of the communication network and the default response list(s) are loaded on to every member cell phone, integrated PDA/cell phone and PC. A list is kept of each integrated PDA/cell phone and PC as they sign on the communications network.

END

Jul. 3, 2012

Sheet 4 of 6

US 8,213,970 B2

Fig. 3A

START

The sender selects the forced messaging alert application software on a sender cell phone, integrated PDA/cell phone or PC and is prompted by said sender cell phone, integrated PDA/cell phone or PC to type the text message or record the voice message

The sender types a text message or records a voice message on said sender cell phone, integrated PDA/cell phone or PC and is then prompted by said sender cell phone, integrated PDA/cell phone or PC to select if the message is to be sent to: a. a single user, b. all users participating in the network or c. a list of users.

The sender then selects the default response list or creates a new response list that is sent with the text message or voice recording

The sender designates instructs said sender cell phone, integrated PDA/cell phone or PC to transmit the message

The forced message alert is transmitted to every designated recipient cell phone, integrated PDA/cell phone and PC

GO TO FIG. 3B

Jul. 3, 2012

Sheet 5 of 6

US 8,213,970 B2

<u>Fig. 3B</u>



The sender cell phone, integrated PDA/cell phone or PC receives and monitors for acknowledgments of receipt from recipient cell phones, integrated PDA/cell phones and PCs and displays an indication of which recipient cell phones, integrated PDA/cell phones and PCs have acknowledged receipt of the message alert

The sender cell phone, integrated PDA/cell phone or PC periodically resends the message alert to the recipient cell phones, integrated PDA/cell phones or PCs that have not acknowledged receipt.

The sender cell phone, integrated PDA/cell phone or PC monitors for and receives responses to the message alert from the recipient cell phones, integrated PDA/cell phones and PCs and displays an indication of the response from each recipient cell phone, integrated PDA/cell phone and PC.



Jul. 3, 2012

Sheet 6 of 6

US 8,213,970 B2

Fig. 4



The forced alert message is received by the recipient cell phone, integrated PDA/cell phone or PC. In response to receipt of the forced alert message, the recipient phone software prepares and sends an automatic acknowledgement of the receipt to the sender cell phone, integrated PDA/cell phone or PC

After the acknowledgement of receipt is sent, the forced voice alert software takes control of the recipient's cell phone, integrated PDA/cell phone or PC and causes the text message to be displayed or the voice message to be periodically repeated and a list of responses to be shown on the display of the recipient cell phone integrated PDA/cell phone or PC PDA/cell

The recipient selects a response from the response list and the recipient cell phone and transmits the response to the senders cell phone.

The forced message alert software releases control of the recipient cell phone, integrated PDA/cell phone or PC and clears the display or stops repeating the voice message

END

1

METHOD OF UTILIZING FORCED ALERTS FOR INTERACTIVE REMOTE COMMUNICATIONS

This application is a continuation-in-part of U.S. patent ⁵ application Ser. No. 11/612,830 filed on Dec. 19, 2006 which is a continuation-in-part of U.S. patent application Ser. No. 11/308,648 filed Apr. 17, 2006 which is a continuation-in-part of U.S. patent application Ser. No. 10/711,490 now U.S. Pat. No. 7,031,728.

BACKGROUND OF THE INVENTION

1. Field of the Invention

A communications system and method that uses a plurality of PCs and PDA/cell phones for the coordination of two or more people through the use of a communications network. The system and method provide each user with a PC or PDA/cell phone that has forced message alert software that enables a user to create and send a voice or text message alert that forces an automatic acknowledgement upon receipt and a manual response from the recipient.

2. Description of Related Art

The purpose of a communications system is to transmit 25 information bearing digital messages from a source, located at one point, to a user destination, located at another point some distance away. A communications system is generally comprised of three basic elements: transmitter, information channel and receiver. One form of communication in recent 30 years is cellular phone telephony. A network of cellular communication systems set up around an area such as the United States allows multiple users to talk to each other, either on individual calls or on group calls, with handheld devices. Some cellular phone services enable a cellular phone to engage in conference calls with a small number of users. Furthermore, cellular conference calls can be established through 800 number services. Cellular telephony also now includes the ability to access local WiFi connections, allowing the devices to utilize cellular phone data transmission technology as well as the data transmission ability of the Internet.

The method and operation of the integrated PDA/cell phones (cell phone/PDA/GPS with touch screen) used herein 45 is described in U.S. Pat. No. 7,031,728, which is hereby incorporated by reference, pending U.S. patent application Ser. No. 11/308,648, and pending U.S. patent application Ser. No. 11/612,830, and are usually discussed herein as a cell phone.

In many situations it is desirable for a user to be able to simultaneously send a message to the cell phones or PCs of a large group of people. This can be typically accomplished using Digital SMS (Smart Message Service) and TCP/IP messages that are transmitted using cellular technology such 55 as the various versions of GSM and CDMA or via a WiFi local area network. However, in some situations it is additionally desirable to know: (a) which people received the message on their cell phone or PC, (b) which people did not receive the message on their cell phone or PC, and (c) the response of 60 each person receiving the message. Digital SMS and TCP/IP messages do not provide each of those functions. As a result, what is needed is a method in which a sender of a text or voice message can force an automatic acknowledgement upon receipt from a recipient's cell phone or PC and a manual response from the recipient via the recipient's cell phone or PC when sending the text or voice message.

2

SUMMARY OF THE INVENTION

Applicant's communication system and method described herein is embodied in the forced alert software developed by applicant and installed in the PCs and PDA/cell phones used herein.

A plurality of PCs and PDA/cell phones each having forced alert software installed providing a communication network of PCs and PDA/cell phones with the ability to: a) allow an operator to create and transmit (via TCP/IP or another digital transmission means) a forced voice alert, wherein said forced voice alert is comprised of a text or voice message file and a forced alert software packet, from a sender PC or PDA/cell phone to one or more recipient PCs and PDA/cell phones within said communication network; (b) automatically transmit an acknowledgement of receipt from said recipient PCs and PDA/cell phones to the sender PCs or PDA/cell phones upon receipt of the forced message alert by the recipient PCs and PDA/cell phones; (c) periodically resend the message to the recipient PCs and PDA/cell phones that have not sent an acknowledgement until an acknowledgement is received from every recipient PC and PDA/cell phone; (d) provide an indication on the display of the sender PC or PDA/cell phone of which recipient PCs and PDA/cell phones have acknowledged the forced message alert; (e) provide a manual response list on the display of the recipient PC and PDA/cell phone's display that can only be cleared by manually selecting and transmitting a response from the list or recording and transmitting a voice response after sending said automatic acknowledgment; and (f) provide an indication on the sender PC or PDA/cell phone of the status the manual response and the content of the manual response from each recipient PCs and PDA/cell phones.

A communication network server can act as a forwarder for TCP/IP communications between any combination of PC users or PDA/cell phone users. The server can also act as a forwarder of data addressed from one participant to one or more addressed participants, thus permitting the transmission of forced text or voice messages, other messages, photographs, video, E-mail and URL data from one network participant to other selected network participants.

The above functions can also be accomplished using WiFi, WiMax or other peer to peer communications. However, for use with cellular communications and to assure the level of security that cell phone companies require, a centralized static IP routable server is used.

It is the object of this invention provide to a method in which by sending a forced text or voice message to a recipient or a group of recipients, a sender can compel an automatic acknowledgement of receipt from each recipient's PC or PDA/cell phone and require a manual response from the recipient via the recipient's cell phone before the message can be cleared.

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1a shows a front elevational view of an integrated PDA/cell phone having a touch screen that includes forced message alert software described herein.

FIG. 1b shows a flow chart that explains the device shown in FIG. 1a.

FIG. 2 shows the installation and set up of the forced message alert software on a communication network of cell phones, integrated PDA/cell phones, and PCs.

3

FIG. 3A shows the first section of a flow chart showing a process of sending a forced message alert to one or more recipients as well as for ascertaining which recipients received the forced message alert and which recipients responded to the forced message alert.

FIG. 3B shows the second section of a flow chart showing a process of sending a forced message alert to one or more recipients as well as for ascertaining which recipients received the forced message alert and which recipients responded to the forced message alert.

FIG. 4 shows a flow chart showing a process of receiving a forced message alert as well as providing an acknowledgment of receipt and a response by the recipient.

PREFERRED EMBODIMENT OF THE INVENTION

A communication system and method that joins participants in a communications network using personal computers ("PC") and handheld cell phones having integrated personal digital assistant ("PDA/cell phone") with a forced message 25 alert software application program that allows a participant to send a text or voice message to a group of people and force an automatic acknowledgment of receipt and a manual response.

Each PDA/cell phone described herein for the participant network has its own individual on/off power and can function 30 just as any other cell phone. It can also function with its PDA. To operate on the network, obviously the PDA/cell phone power switch has to be on. If the PDA/cell phone is completely turned off, then it is not part of the participating network and cannot send or receive any forced message 35 alerts. In addition to its own on and off power switch, it has the forced message alert software application program that is activated manually when preparing to send a text or voice message or is activated automatically when receiving a forced message alert from another PC or PDA/cell phone.

Each PC described herein is like any other contemporary PC, except that it has the forced message alert software application program installed on it. To operate on the network, obviously the PC must be on and have an active connection to the Internet or other digital transmission means. If the PC is completely turned off, then it is not part of the participating network and cannot send or receive any forced message alerts. The forced message alert software application program on the PC is activated manually when preparing to send a text or voice message or is activated automatically when receiving 50 a forced message alert from another PC or PDA/cell phone.

The communication system also includes a server that acts as a forwarder for IP communications between any combination of PDA/cell phone users and/or PC based users. Network participant location, identity and status messages are sent to 55 the server by each user. The users are the network participants. Network participant entered tracks are also sent to the server. Because this data is of interest to all the network participants, the server forwards the data received from one participant to all other participants, thus providing the infor- 60 mation necessary for all network participants to know the identity, location and status of all other network participants. In addition, the server keeps all of the network participants updated on information kept in its databases, such as all of the participants' telephone numbers, E-mail addresses and other 65 information necessary to carry on the communications described herein.

4

The server also acts as a forwarder of data addressed from one participant to one or more addressed participants, thus permitting the transmission of forced message alerts, other text and voice messages, photographs, video, E-mail and URL data from one network participant to other selected network participants.

The above functions can also be accomplished using WiFi, WiMax, or other peer to peer communications. However, for use with cellular communications and to assure the level of security that cell phone companies require, a centralized static IP routable server is used.

Referring now to the drawings and, in particular, FIGS. 1a and 1b, a small handheld cellular phone 10 is shown that includes a PDA integrated in housing 12 that includes an on/off power switch 19, a microphone 38, and an LCD display 16 that is also a touch screen system. The small area 16a is the navigation bar that depicts the telephone, GPS and other status data and the active software. Each cell phone includes a CPU and databases that store information useful in the 20 communication network. With the touch screen 16, data can be entered through the operator using a stylus 14 (or operator finger) by manipulatively directing the stylus 14 to literally touch display 16. Soft switches 16d displayed on the display 16 are likewise activated by using a stylus 14 and physically and manipulatively directing the stylus to literally touch display 16. The display x, y coordinates of the touched point are known by a CPU in the PDA section of the communication system in housing 12 that can coordinate various information contained in the PDA relative to the x, y coordinate position on the display 16. Inside housing 12 is contained the conventional cellular phone elements including a modem, a CPU for use with a PDA and associated circuitry connected to speaker 24 and microphone 38. Conventional PDA/cellular phones are currently on sale and sold as a unit that can be used for cellular telephone calls and sending cellular SMS and TCP/IP or other messages using the PDA's display 16 and CPU. The device 10 includes a pair of cellular phone hardware activating buttons 20 to turn the cellular phone on and 22 to turn the cellular phone off. Navigation pad actuator 18 is similar to a joy or force stick in that the actuator 18 manually provides movement commands that can be used by the PDA's software to move a cursor on display 16. Switches 26 and 28 are designed to quickly select an operator specified network software program. Speaker 24 and microphone 38 are used for audio messages. Switch 19 at the top left of device 10 is the power on and power off switch for the entire device.

The heart of the invention lies in the forced message alert software application program provided in each PC or PDA/cell phone. The forced message alert software application program is activated through use of a screen drawn soft switch or by clicking on an icon on the PC or PDA/cell phone display screen or when a forced message alert transmission is received by another PC or PDA/cell phone. The display 16 is mounted within the housing 12 as part of the PDA and the CPU (not shown). The internal CPU includes databases and software application programs that provide for a geographical map and georeferenced entities that are shown as display portion 16b that includes as part of the display various areas of interest in the particular local map section.

When looking at display 16, the software switches (soft switches) which appear at the very bottom of the display 16d are used to control by touch many of the software driven functions of the PDA/cell phone. The soft switches are activated through the operator's use of the navigation pad 18, or a small track ball, force stick or similar hardware display cursor pointing device. Alternatively, the operator may choose to activate the software switches by touching the

5

screen with a stylus 14 (or finger) at the switches' 16d locations. When some of the software switches are activated, different software switches appear. The bar display 16d shows the software switches "ZM IN (zoom in)," "ZM OT (zoom out)," "CENT (center)" and "GRAB (pan/grab)" at the 5 bottom of the screen. These software switches enable the operator to perform these functions. The "SWITH (switch)" software switch at the lower right causes a matrix of layered software switches (soft switches) to appear above the bottom row of switches. Through use of the software switches, the 10 operator can also manipulate the geographical map 16b or chart display. When looking at FIG. 1a, display symbols depict permanent geographical locations and buildings are shown. For example, the police station is shown and, when the symbol is touched by the stylus or finger, the latitude and 15 longitude of the symbol's location, as shown in display section 16c, is displayed at the bottom left of the screen. The bottom right side of display 16c is a multifunction inset area that can contain a variety of information including: a) a list of the communication link participants; b) a list of received 20 messages; a) a map, aerial photograph or satellite image with an indication of the zoom and offset location of the main map display, which is indicated by a square that depicts the area actually displayed in the main geographical screen 16b; d) applicable status information; and e) a list of the communi- 25 cation net participants. Each participant user would have a device 10 shown in FIGS. 1a and 1b.

Also shown on the display screen 16, specifically the geographical display 16b, is a pair of different looking symbols 30 and 34, a small triangle and a small square, which are not 30 labeled. These symbols 30 and 34 can represent communication net participants having cellular phones in the displayed geographical area that are part of the overall cellular phone communications net, each participant having the same device 10 used. The latitude and longitude of symbol 30 is associated 35 within a database with a specific cell phone number and, if available, its IP address and E-mail address. The screen display 16b, which is a touch screen, provides x and y coordinates of the screen 16b to the CPU's software from a map in a geographical database. The software has an algorithm that 40 relates the x and y coordinates to latitude and longitude and can access a communications net participant's symbol or a fixed or movable entity's symbol as being the one closest to

In order to initiate a telephone call to the PDA/cell phone 45 user (communication net participant) represented by symbol (triangle) 30 at a specific latitude and longitude displayed on chart 16b, the operator touches the triangle 30 symbol with the stylus 14. The operator then touches a "call" software switch from a matrix of displayed soft switches that would 50 overlay the display area 16c. Immediately, the PDA/cell phone will initiate a cellular telephone call to the PDA/cell phone user at the geographical location shown that represents symbol 30. A second PDA/cell phone user (communication net participant) is represented by symbol 34 which is a small 55 square (but could be any shape or icon) to represent an individual cellular phone device in the display area. The ring 32 around symbol 30 indicates that the symbol 30 has been touched and that a telephone call can be initiated by touching the soft switch that says "call." When this is done, the tele- 60 phone call is initiated. Other types of symbolic elements on the display 16 can indicate that a cellular phone call is in effect. Additionally, the operator can touch both symbol 34 and symbol 30 and can activate a conference call between the two cellular phones and users represented by symbols 30 and 34. Again, a symbolic ring around symbol 34 indicates that a call has been initiated.

6

Equally important, an operator/user with a PDA/cell phone call the police station or any other specific geographical facility displayed on the cell display map, including: buildings, locations of people, vehicles, facilities, restaurants, and the like, whose PDA/cell phone numbers and, if available, E-nail addresses, IP addresses and their URLs are previously stored in the database, by touching a specific facility location on the map display using the stylus 14 and then touching the cellular phone call switch. As an example, the operator/user can touch and point to call a restaurant using a soft switch by touching the restaurant location on the display with a stylus and then touching the call soft switch. The cellular phone will then call the restaurant. Thus, using the present invention, each participant can touch and point to call to one or more other net participants symbolically displayed on the map, each of whom has a device as shown in FIG. 1a and can also point to call facilities and regular phone numbers that had been previously stored in the phone's database. Furthermore, this symbol hooking and soft switch technique can be used to go to a fixed facility's website or to automatically enter the fixed facility's E-mail address in an e-mail.

Each PDA/cell phone user device is identified on the map display of the other participants users' phone devices by a display symbol that is generated on each user phone display to indicate each user's identity. Each symbol is placed at the correct geographical location on the user display and is correlated with the map on the display. The operator of each PDA/cell phone device may also enter one or more other fixed entities (buildings, facilities, restaurants, police stations, etc.) and geo-referenced events such as fires, accidents, or other events into its database. This information can be likewise transmitted to all the other participants on the communications net. The map, fixed entities, events and PDA/cell phone device communication net participants' latitude and longitude information is related to the "x" and "y" location on the touch screen display map by a mathematical correlation algorithm.

When the PDA/cell phone device user uses a stylus or finger to touch one or more of the symbols or a location displayed on the cellular phone map display, the system's software causes the status and latitude and longitude information concerning that symbol or location to be displayed. In order to hook a symbol or "track" such as another net participant which represents an entity on the geo-referenced map display, or a fixed geographical entity such as a restaurant, police station or a new entity observed by a cell phone user which is discussed below, the operator points at or near the location of a geo-referenced symbol appearing on the PDA/ cell phone display that represents a specific track or specific participant or other entity. The hook application software determines that the stylus is pointed close to or at the location of the symbol and puts a circle, square or other indication around the symbol indicating that amplification information concerning the symbol is to be displayed and indicating that additional data or change in data can be made to the indicated symbol. The hook application code then sends a message to the display application code to display the net participant, facility or entity's amplifying data. The display application code retrieves the primary data and amplification data concerning the symbol or entity from the database and displays the information at the correct screen location. The operator can then read the amplification data that relates to that specific symbol at the specific location. The PDA/cell phone operator can also select soft switches on the touch screen display to change the primary data and amplification data. Furthermore, the operator can use a similar method of hooking and selecting to activate particular soft switches to take other actions

7

which could include: making cellular phone calls, conference calls, 800 number calls; sending a free text message, operator selected preformatted messages, photographs or videos to the hooked symbol; or to drop a entered symbol.

Each known net participant has a PDA/cell phone number, 5 IP address and, if available, E-mail address that is stored in each participant's device database.

Referring now to FIG. 2, in order to set up a communication network that utilizes the forced message alert system, the forced message alert software application program must be 10 installed on a plurality of PCs and/or PDA/cell phones. The application will provide for a forced alert message that can be designated for transmission according to several criteria: a.) A single PC and/or PDA/cell phone, b.) The list of users currently participating in the network, and c.) A user or 15 administrator predefined list of network participants.

A required response list which will be either preinstalled in the phone application software or sent with the forced message alert will be presented to the user operator upon receipt of the forced message. When the forced text or voice alert is 20 received, the user operator is presented with the required response list. In order to clear the forced text message alert from the user operator's PC or PDA/cell phone display, the user operator is required to select a reply from this list. If the alert is a voice message, the message keeps repeating at a 25 defined rate until the user operator selects from the required response list. A military default response list would typically consist of choices such as, "will comply," "will not comply," and "have complied." However, depending on the nature of the industry in which the users in the communication network 30 are in, this default response list could vary significantly.

The contact and identifying information for each PC and PDA/cell phone that is anticipated to be a member of the communication network and the default response list is loaded on to every member PC and PDA/cell phone in the 35 preferred embodiment. This step makes sure the each user of the communication network has, in addition to the necessary software, the necessary information to send a forced message alert to any and every known member of the communication network. When operating in an open network mode where all 40 that know the password can join the network, the default list is created or expanded as new members join.

Referring now to FIG. 3A and FIG. 3B, the process of sending a forced message alert from a PC or PDA/cell phone begins with a sender selecting the forced message alert soft- 45 ware application program on a sender PC or PDA/cell phone. The sender can then select by said sender PC or PDA/cell phone to type a text message or record a voice message or select the text alert or voice alert from a list. Once the sender types a text message or records a voice message or selects a 50 voice or text message on said PC or PDA/cell phone, the sender can then use a soft switch or selection from a list to send the forced alert to: a.) Another network participant, b.) The current PC or PDA/cell phone network participants or c.) A user or administrator predefined list of network partici- 55 pants. The response list from which the message receiver must select can either be included in the forced alert message or be preloaded in each phone. The forced alert message is then transmitted via TCP/IP or other digital transmission means to every PC or PDA/cell phone designated to receive 60 the forced message alert either directly or through a server whose function is to retransmit the messages to the correct users in the communications network.

After the forced message alert is transmitted, the sender PC or PDA/cell phone monitors for and receives electronic transmissions with acknowledgments of receipt from the PCs or PDA/cell phones that have received the forced message alert.

8

Then, the sender PC or PDA/cell phone provides an indication of which of the PC or PDA/cell phone that the forced message alert was sent to have acknowledged receipt and which of the PC or PDA/cell phone that the forced message alert was sent to have not acknowledged receipt on its display. The sender PC or PDA/cell phone will then periodically resend the forced message alert to the PC or PDA/cell phone that have not acknowledged receipt.

The sender PC or PDA/cell phone also monitors for and receives electronic transmissions with manual responses to the forced message alert from the PC or PDA/cell phone that received the message. As these electronic transmissions with manual responses are received, the sender PC or PDA/cell phone displays an indication of the response from each recipient cell phone, integrated PDA/cell phone and PC.

Referring now to FIG. 4, the process of receiving, acknowledging and responding to a forced message alert from the sender PC or PDA/cell phone begins when an electronic transmission is received by a recipient PC or PDA/cell phone. When the electronic transmission is received by the recipient PC or PDA/cell phone, the recipient PC or PDA/cell phone identifies the transmission as a forced message alert and the forced message alert software application program on the recipient PC or PDA/cell phone separates the text or voice message and the forced message alert software packet. Immediately following the detection of the forced message alert, the forced message alert software application program on the recipient PC or PDA/cell phone prepares and electronically transmits an automatic acknowledgement of receipt to the sender PC or PDA/cell phone. However, if the recipient PC or PDA/cell phone is powered off or is not able to receive electronic transmissions, the forced message alert is not received by the recipient PC or PDA/cell phone and no acknowledgment is transmitted. If no acknowledgement is received, the sender PC or PDA/cell phone continues to transmit the forced alert at a predefined rate until acknowledged.

After the acknowledgement of receipt is transmitted, the forced voice alert software application program effectively takes control of the recipient PC or PDA/cell phone. If a text message was received, the forced voice alert software application program causes the text message and the response list to be shown on the display of the recipient PC or PDA/cell phone until a manual response is selected from the response list. Upon selection of the desired response, the forced alert text data is cleared from the recipient PC or PDA/cell phone display. If a voice message was received, the forced voice alert software application program causes the voice message to be periodically repeated using the speakers of the recipient PC or PDA/cell phone while the response list is shown on the display. This voice message cannot be stopped from repeating until one of the entries on the response list is selected.

Once a response is selected or recorded and transmitted to the sender PC or PDA/cell phone, the forced message alert software application program releases effective control of the recipient PC or PDA/cell phone, clears the display, and or stops repeating the voice message and transmits the response to the force alert sender.

The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made there from within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

 A communication system for transmitting, receiving, confirming receipt, and responding to an electronic message, comprising:

9

- a predetermined network of participants, wherein each participant has a similarly equipped PDA/cell phone that includes a CPU and a touch screen display a CPU and memory;
- a data transmission means that facilitates the transmission 5 of electronic files between said PDA/cell phones in different locations;
- a sender PDA/cell phone and at least one recipient PDA/cell phone for each electronic message;
- a forced message alert software application program 10 including a list of required possible responses to be selected by a participant recipient of a forced message response loaded on each participating PDA/cell phone;
- means for attaching a forced message alert software packet to a voice or text message creating a forced message alert 15 that is transmitted by said sender PDA/cell phone to the recipient PDA/cell phone, said forced message alert software packet containing a list of possible required responses and requiring the forced message alert software on said recipient PDA/cell phone to transmit an 20 automatic acknowledgment to the sender PDA/cell phone as soon as said forced message alert is received by the recipient PDA/cell phone;
- means for requiring a required manual response from the response list by the recipient in order to clear recipient's 25 response list from recipient's cell phone display;
- means for receiving and displaying a listing of which recipient PDA/cell phones have automatically acknowledged the forced message alert and which recipient PDA/cell phones have not automatically acknowledged 30 the forced message alert;
- means for periodically resending said forced message alert to said recipient PDA/cell phones that have not automatically acknowledged the forced message alert; and
- means for receiving and displaying a listing of which 35 recipient PDA/cell phones have transmitted a manual response to said forced message alert and details the response from each recipient PDA/cell phone that responded
- 2. The system as in claim 1, wherein the forced message 40 alert software application program on the recipient PDA/cell phone includes:
 - means for transmitting the acknowledgment of receipt to said sender PDA/cell phone immediately upon receiving a forced message alert from the sender PDA/cell phone; 45
 - means for controlling of the recipient PDA/cell phone upon transmitting said automatic acknowledgment and causing, in cases where the force message alert is a text message, the text message and a response list to be shown on the display of the recipient PDA/cell phone or causes, in cases where the forced message alert is a voice message, the voice message being periodically repeated by the speakers of the recipient PDA/cell phone while said response list is shown on the display;
 - means for allowing a manual response to be manually 55 selected from the response list or manually recorded and transmitting said manual response to the sender PDA/cell phone; and
 - means for clearing the text message and a response list from the display of the recipient PDA/cell phone or 60 stopping the repeating voice message and clearing the response list from the display of the recipient PDA/cell phone once the manual response is transmitted.
- 3. The system as in claim 1, wherein said data transmission means is TCP/IP or another communications protocol.
- **4**. The system as in claim **1**, wherein the response list that is transmitted within the forced message alert software packet

10

- is a default response list that is embedded in the forced message alert software application program.
- 5. The system as in claim 1, wherein the response list that is transmitted within the forced message alert software packet is a custom response list that is created at the time the specific forced message alert is created on the sender PDA/cell phone.
- **6**. A method of sending a forced message alert to one or more recipient PDA/cell phones within a predetermined communication network, wherein the receipt and response to said forced message alert by each intended recipient PDA/cell phone is tracked, said method comprising the steps of:
 - accessing a forced message alert software application program on a sender PDA/cell phone;
 - creating the forced message alert on said sender PDA/cell phone by attaching a voice or text message to a forced message alert application software packet to said voice or text message;
 - designating one or more recipient PDA/cell phones in the communication network;
 - electronically transmitting the forced message alert to said recipient PDA/cell phones;
 - receiving automatic acknowledgements from the recipient PDA/cell phones that received the message and displaying a listing of which recipient PDA/cell phones have acknowledged receipt of the forced message alert and which recipient PDA/cell phones have not acknowledged receipt of the forced message alert;
 - periodically resending the forced message alert to the recipient PDA/cell phones that have not acknowledged receipt:
 - receiving responses to the forced message alert from the recipient PDA/cell phones and displaying the response from each recipient PDA/cell phone; and
 - providing a manual response list on the display of the recipient PDA/cell phone that can only be cleared by the recipient providing a required response from the list;
 - clearing the recipient's display screen or causing the repeating voice alert to cease upon recipient selecting a response from the response list required that can only be cleared by manually selecting and transmitting a response to the manual response list.
- 7. The method as in claim 6, wherein each PDA/cell phone within a predetermined communication network is similarly equipped and has the forced message alert software application program loaded on it.
- 8. The method as in claim 6, wherein said forced message alert application software packet contains a response list, wherein said response list is a default list embedded in the forced message alert software application program.
- 9. The method as in claim 6, wherein said forced message alert application software packet contains a response list, wherein said response list is a custom response list that is created at the time the specific forced message alert is created on the sender PDA/cell phone.
- 10. A method of receiving, acknowledging and responding to a forced message alert from a sender PDA/cell phone to a recipient PDA/cell phone, wherein the receipt, acknowledgment, and response to said forced message alert is forced by a forced message alert software application program, said method comprising the steps of:
 - receiving an electronically transmitted electronic message; identifying said electronic message as a forced message alert, wherein said forced message alert comprises of a voice or text message and a forced message alert application software packet, which triggers the activation of the forced message alert software application program within the recipient PDA/cell phone;

11

transmitting an automatic acknowledgment of receipt to the sender PDA/cell phone, which triggers the forced message alert software application program to take control of the recipient PDA/cell phone and show the content of the text message and a required response list on the display recipient PDA/cell phone or to repeat audibly the content of the voice message on the speakers of the recipient PDA/cell phone and show the required response list on the display recipient PDA/cell phone; and

transmitting a selected required response from the response list in order to allow the message required response list to be cleared from the recipient's cell phone display, whether said selected response is a chosen option from the response list, causing the forced message alert software to release control of the recipient PDA/cell phone and stop showing the content of the text message and a response list on the display recipient PDA/cell phone and or stop repeating the content of the voice message on the speakers of the recipient PDA/cell 20 phone;

12

displaying the response received from the PDA cell phone that transmitted the response on the sender of the forced alert PDA/cell phone; and

providing a list of the recipient PDA/cell phones have automatically acknowledged receipt of a forced alert message and their response to the forced alert message.

- 11. The method as in claim 10, wherein each PDA/cell phone within a predetermined communication network is similarly equipped and has the forced message alert software application program loaded on it.
- 12. The method as in claim 10, wherein said forced message alert application software packet contains a response list, wherein said response list is a default list embedded in the forced message alert software application program.
- 13. The method as in claim 10, wherein said forced message alert application software packet contains a response list, wherein said response list is a custom response list that is created at the time the specific forced message alert is created on the sender PDA/cell phone.

* * * * *

Exhibit D

US010299100B2

(12) United States Patent

Beyer, Jr. et al.

(10) Patent No.: US 10,299,100 B2

(45) **Date of Patent:** May 21, 2019

(54) METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

(71) Applicant: AGIS Software Development LLC,

Marshall, TX (US)

(72) Inventors: Malcolm K. Beyer, Jr., Jupiter, FL

(US); Christopher R. Rice, Redmond,

WA (US)

(73) Assignee: AGIS SOFTWARE DEVELOPMENT

LLC, Marshall, TX (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 15/722,660

(22) Filed: Oct. 2, 2017

(65) Prior Publication Data

US 2018/0027111 A1 Jan. 25, 2018

Related U.S. Application Data

- (63) Continuation of application No. 15/469,469, filed on Mar. 24, 2017, which is a continuation of application (Continued)
- (51) **Int. Cl. H04W 4/90** (2018.01) **H04M 1/725** (2006.01)

 (Continued)

(56) References Cited

U.S. PATENT DOCUMENTS

5,325,310 A 6/1994 Johnson et al. 5,555,286 A 9/1996 Tendler (Continued)

FOREIGN PATENT DOCUMENTS

EP 1148754 A2 10/2001 EP 1655888 A1 5/2006 (Continued)

OTHER PUBLICATIONS

Batista, E., "Your Boss May Know Where You Are," Wired News, May 31, 2002; 2pgs.

(Continued)

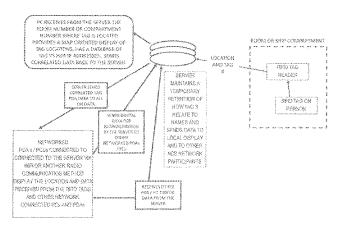
Primary Examiner — Omoniyi Obayanju (74) Attorney, Agent, or Firm — Goodwin Procter LLP

(57) ABSTRACT

A method and system includes the ability for individuals to set up an ad hoc digital and voice network easily and rapidly to allow users to coordinate their activities by eliminating the need for pre-entry of data into a web or identifying others by name, phone numbers or email. This method is especially useful for police, fire fighters, military, first responders or other emergency situations for coordinating different organizations at the scene of a disaster to elevate conventional communication problems either up and down the chain of command or cross communication between different emergency units. The method and system provides that the users are only required to enter a specific Server IP address and an ad hoc event name, a password and perhaps the name of the particular unit.

31 Claims, 7 Drawing Sheets

ENABLING NON RFID EQUIPPED PDA PHONES TO RECEIVE RFID TAG DATA.



Page 2

Related U.S. Application Data

No. 15/287,638, filed on Oct. 6, 2016, now Pat. No. 9,706,381, which is a continuation of application No. 14/529,978, filed on Oct. 31, 2014, now Pat. No. 9,467,838, which is a continuation-in-part of application No. 14/027,410, filed on Sep. 16, 2013, now Pat. No. 8,880,042, which is a continuation of application No. 13/751,453, filed on Jan. 28, 2013, now Pat. No. 8,538,393, which is a continuation-in-part of application No. 12/761,533, filed on Apr. 16, 2010, now Pat. No. 8,364,129, which is a continuation-inpart of application No. 11/615,472, filed on Dec. 22, 2006, now Pat. No. 8,126,441, which is a continuation-in-part of application No. 11/308,648, filed on Apr. 17, 2006, now Pat. No. 7,630,724, which is a continuation-in-part of application No. 10/711,490, filed on Sep. 21, 2004, now Pat. No. 7,031,728.

(51) Int. Cl. H04W 68/00 (2009.01)H04W 4/02 (2018.01)H04W 76/50 (2018.01)H04W 76/11 (2018.01)H04M 1/2745 (2006.01)H04W 4/08 (2009.01)H04W 64/00 (2009.01)H04W 84/18 (2009.01)H04W 12/08 (2009.01)H04W 12/02 (2009.01)G06F 3/0482 (2013.01)G06F 3/0484 (2013.01)H04L 29/06 (2006.01)H04L 29/08 (2006.01)H04W 4/021 (2018.01)H04L 29/12 (2006.01)H04M 7/00 (2006.01)H04W 12/06 (2009.01)H04W 68/04 (2009.01)G01S 19/17 (2010.01)H04M 3/56 (2006.01)H04W 4/14 (2009.01)H04W 76/15 (2018.01)H04W 4/10 (2009.01)H04W 76/45 (2018.01)H04W 12/04 (2009.01)H04W 84/04 (2009.01)

(52) U.S. Cl.

CPC G06F 3/04842 (2013.01); H04L 61/605 (2013.01); H04L 63/065 (2013.01); H04L 63/083 (2013.01); H04L 63/104 (2013.01); H04L 67/18 (2013.01); H04M 1/27455 (2013.01); H04M 1/72519 (2013.01); H04M 1/72536 (2013.01); H04M 1/72547 (2013.01); H04M 1/72572 (2013.01); H04M 1/72583 (2013.01); H04M 3/56 (2013.01); H04M 7/006 (2013.01); H04W 4/02 (2013.01); H04W 4/021 (2013.01); H04W 4/023 (2013.01); H04W 4/026 (2013.01); H04W 4/027 (2013.01); H04W 4/08 (2013.01); H04W 4/14 (2013.01); H04W 12/02 (2013.01); H04W 12/06 (2013.01); H04W 12/08 (2013.01); H04W 64/00 (2013.01); H04W 68/00 (2013.01); H04W 68/04 (2013.01); H04W 76/11 (2018.02); H04W 76/15 (2018.02); H04W 76/50 (2018.02); H04W 84/18 (2013.01); H04L 61/2007 (2013.01); H04M 1/72525 (2013.01); H04M 2250/10 (2013.01); H04M 2250/22 (2013.01); H04M 2250/62 (2013.01); H04W 4/10 (2013.01); H04W 12/04 (2013.01); H04W 76/45 (2018.02); H04W 84/042 (2013.01)

(56) References Cited

U.S. PATENT DOCUMENTS

```
5,563,931 A
                 10/1996 Bishop et al.
5,692,032 A
                 11/1997
                          Seppanen
5,742,905 A
                 4/1998
                          Pepe et al.
5,764,898 A
5,898,434 A
                 6/1998
                          Tsuji et al.
                 4/1999
                          Small et al
                 8/2000
6,104,704 A
                          Buhler et al.
6,108,704 A
                 8/2000
                          Hutton
6,119,017 A
                 9/2000
                          Cassidy et al.
6,128,291 A
                 10/2000
                          Perlman et al.
6,148,332 A
                 11/2000
                          Brewer
6,182,114 B1
                  1/2001
                          Yap et al.
6,204,844 B1
                 3/2001
                          Fumarolo et al.
6,232,971 B1
                  5/2001
                          Haynes
6,271,835 B1
                 8/2001
                          Hoeksma
6,292,747 B1
                 9/2001
                          Amro et al.
6,366,782 B1
                 4/2002
                          Fumarolo et al.
6,377,210 B1
                  4/2002
                          Moore
6,385,465 B1
                  5/2002
                          Yoshioka
6,434,403 B1
                 8/2002
                          Ausems et al.
6,459,440 B1
                 10/2002
                          Monnes et al.
6,477,387 B1
                 11/2002
                          Jackson et al.
6,487,595 B1
                 11/2002
                         Turunen et al.
6,490,521 B2
                 12/2002
                          Wiener
6,504,503 B1
                  1/2003 Saint Hilaire et al.
6,518,957 B1
                  2/2003
                          Lehtinen et al.
6,542,475 B1
                 4/2003 Bala et al.
6,549,768 B1
                 4/2003 Fraccaroli
6.654.683 B2
                 11/2003 Jin et al.
6,661,353 B1
                 12/2003 Gopen
6,662,016 B1
                 12/2003 Buckham et al.
6,665,293 B2
6,697,734 B1
                 12/2003
                          Thornton et al.
                 2/2004
                          Suomela
6,700,589 B1
                 3/2004
                          Canelones et al.
6,704,303 B1
                  3/2004
                          Bowman-Amuah
6,716,101 B1
                  4/2004
                          Meadows et al.
6,772,142 B1
                 8/2004
                          Kelling et al.
6,775,560 B2
                 8/2004
                          King et al.
6,816,878 B1
6,854,007 B1
                 11/2004
                          Zimmers et al.
                 2/2005
                          Hammond
6,867,733 B2
                 3/2005
                          Sandhu et al.
6,868,333 B2
                  3/2005
                          Melen
6,868,337 B2
                  3/2005
                          Muramatsu
6,882,856 B1
                 4/2005
                          Alterman et al.
6,885,874 B2
                 4/2005
                          Grube et al.
6,941,127 B2
                  9/2005
                          Muramatsu
7,002,952 B2
                  2/2006
                         Jones
7,024,207 B2
7,031,700 B1
                 4/2006
                          Gorday et al.
                 4/2006
                          Weaver et al.
7,031,728 B2
                  4/2006
                          Beyer, Jr.
7,039,040 B1
                  5/2006
                          Burg
7,103,333 B2
                  9/2006
                          Lazaridis et al.
7,158,878 B2
                  1/2007
                          Rasmussen et al.
7,194,083 B1
                  3/2007
                          Tischer et al.
7,219,303 B2
                  5/2007
                          Fish
7,271,742 B2
                  9/2007
                          Sheha et al.
                 11/2007
7.292.935 B2
                          Yoon
7,299,075 B2
                 11/2007
                          Gottlieb et al.
7,330,112 B1
                  2/2008
                          Emigh et al.
7,353,034 B2
                 4/2008
                          Haney
7,386,589 B1
                 6/2008
                          Tanumihardja et al.
7,398,551 B2
                  7/2008
                          Thomas et al.
7,421,270 B2
                  9/2008
                          Serafat et al.
7,426,202 B2
                 9/2008
                          Warrier et al.
7,450,003 B2
                 11/2008
                          Weber et al.
7,454,233 B2
                 11/2008 Lu et al.
7,474,627 B2
                  1/2009
                         Chheda et al.
```

7,486,648 B1

2/2009 Baranowski

US 10,299,100 B2 Page 3

(56)	Referen	ces Cited			0157590 A1 0192299 A1		Lazaridis et al. Wilson et al.	
U.S.	PATENT	DOCUMENTS			0204070 A1		August et al.	
					0213215 A1		Kakiuchi	
7,499,799 B2	3/2009				0243710 A1 0252050 A1	12/2004	Mao Tengler et al.	
7,574,353 B2 7,593,740 B2		Trombetta et al. Crowley et al.			0266456 A1		Bostrom et al.	
7,609,669 B2		Sweeney et al.			0027705 A1*	2/2005	Sadri G06F 1	7/30241
7,619,584 B2	11/2009				0030977 A1 0060069 A1		Casey et al. Breed et al.	
7,630,724 B2 7,633,898 B2		Beyer, Jr. et al. Jain et al.			0113123 A1		Torvinen	
7,672,681 B1	3/2010			2005/	0130634 A1	6/2005	Godfrey	
7,689,232 B1	3/2010				0130666 A1 0221876 A1		Levy et al. Van Bosch et al.	
7,764,954 B2 7,801,134 B2		Beyer, Jr. Hori et al.			0227705 A1		Rousu et al.	
7,801,781 B2		Olin et al.		2005/	0246419 A1		Jaatinen	
7,805,146 B1	9/2010				0265256 A1 0270311 A1		Delaney Rasmussen et al.	
7,848,765 B2 7,853,273 B2	12/2010	Phillips et al.			0015407 A1		Bernard et al.	
7,912,913 B2		Accapadi et al.			0030339 A1		Zhovnirovsky et al.	
7,917,866 B1	3/2011	Karam			0031927 A1		Mizuno et al.	
8,000,724 B1 8,014,763 B2*		Rayburn Hymes	H04M 1/26		0035647 A1		Eisner et al.	
8,014,703 B2	9/2011	Tryllies	455/414.2		0039353 A1 0047825 A1		Samuel et al. Steenstra et al.	
8,078,164 B2	12/2011	Ganesan	100/11/12		0155871 A1		Ilkka et al.	
8,126,441 B2		Beyer, Jr.			0178128 A1	8/2006		
8,139,514 B2 8,213,970 B2	7/2012	Weber et al. Bever			0218232 A1 0047707 A1		Kubala et al. Mayer et al.	
8,250,155 B2		Corry et al.			0047707 A1		Baudino	
8,300,644 B2		Gilbert et al.			0150444 A1		Chesnais et al.	
8,364,129 B1 8,369,843 B2		Beyer, Jr. Fux et al.			0153986 A1		Bloebaum et al.	
8,538,393 B1		Beyer, Jr. et al.		2007/	0178912 A1*	8/2007	Baranowski G06	5Q 30/02 55/456.2
8,549,285 B2		Fink et al.		2007/	0200713 A1	8/2007	Weber et al.	33/430.2
RE44,716 E 8,713,302 B1		Vaziri et al. Kirchhoff			0218885 A1		Pfleging et al.	
8,731,158 B2		Donovan			0281689 A1		Altman et al.	
8,781,089 B2		Gilboa et al.			0281690 A1 0132243 A1		Altman et al. Spalink et al.	
8,792,479 B2 8,880,042 B1		Bender et al. Beyer, Jr. et al.			0219416 A1		Roujinsky	
8,982,876 B2		Kundaje et al.			0304460 A1		Thermond	
9,019,946 B1		Rao et al.			0052945 A1	3/2010		
9,408,055 B2 9,445,251 B2		Beyer, Jr. Beyer, Jr. et al.			0125636 A1 0053554 A1		Kuhlke et al. Wong et al.	
9,467,838 B2	10/2016	Beyer, Jr. et al.			00033334 A1		Borghei	
9,544,271 B2		McFarland et al.			0183949 A1		Sulmar	
9,706,381 B2 9,749,829 B2		Beyer, Jr. et al. Beyer, Jr. et al.			0067055 A1		Khera et al.	
9,820,123 B2		Beyer, Jr. et al.			0264167 A1 0319789 A1		Beyer, Jr. et al. Beyer, Jr. et al.	
2001/0026609 A1		Weinstein et al.			0021522 A1		Beyer, Jr. et al.	
2001/0044321 A1 2002/0027901 A1		Ausems et al. Liu et al.			0057598 A1	2/2016	Beyer, Jr. et al.	
2002/0061762 A1	5/2002	Maggenti et al.			0026815 A1		Beyer, Jr. et al.	
2002/0064147 A1	5/2002	Jonas et al.			0201621 A1 0238158 A1		Beyer, Jr. et al. Beyer, Jr. et al.	
2002/0115450 A1 2002/0115453 A1		Muramatsu Poulin et al.			0152556 A1		Beyer, Jr. et al.	
2002/0135615 A1	9/2002	Lang					• '	
2002/0173906 A1 2002/0194378 A1	11/2002 12/2002	Muramatsu			FOREI	GN PATE	NT DOCUMENTS	
2002/0194378 A1 2003/0013461 A1		Mizune et al.		EP	18'	74021 A1	1/2008	
2003/0081011 A1	5/2003	Sheldon et al.		EP		18423 A2	7/2011	
2003/0093405 A1	5/2003	•	U04W 94/09	JP		8448 A	12/1992	
2003/0100326 A1*	3/2003	Grube 1	455/515	JP JP)3335 A -5394 A	11/1993 1/1996	
2003/0103072 A1	6/2003	Ko	100/020	JР		13288 A	5/1997	
2003/0103088 A1		Dresti et al.		JP		7296 A	12/2000	
2003/0114171 A1 2003/0128195 A1		Miyamoto Banerjee et al.		JP JP		77372 A 15336 A	3/2002 8/2002	
2003/0139150 A1	7/2003	Rodriguez et al.		JP		7256 A	9/2002	
2003/0149527 A1	8/2003			JP	200313	39546 A	5/2003	
2003/0200259 A1 2003/0217109 A1	10/2003	Tsuge Ordille et al.		JP JP		30172 A 54861 A	8/2003 9/2003	
2003/0224762 A1		Lau et al.		JP JP		32560 A	11/2007	
2003/0229441 A1		Pechatnikov		WO	WO-2002/	17567 A2	2/2002	
2004/0054428 A1 2004/0137884 A1		Sheha et al. Engstrom et al.		WO WO	WO-20013 WO-2003/0		4/2002 8/2003	
2004/0143391 A1		King et al.		wo	WO-2003/0 WO-03/0'		9/2003	
2004/0148090 A1*	7/2004	Melen		WO	WO-2003/09	96660 A1	11/2003	
			701/482	WO	WO-2008/03	60702 A2	3/2008	

Page 4

(56) References Cited

FOREIGN PATENT DOCUMENTS

WO WO-2008027891 A2 3/2008 WO WO-2008/118878 A2 10/2008

OTHER PUBLICATIONS

Benefon ESC! GSM + GPS Personal Navigation Phone, 1999, Benefon Oyj, Salo, Finland; 4pgs.

Edlund, T. and Ciber, S., "Mobile Services for Truck Drivers," Master Thesis in Mobile Informatics, IT University of Goleborg, Sweden; 2003; 50pgs.

Garmin rino 110 2-way Radio & Personal Navigator; Owner's Manual and Reference Guide; Apr. 2003; 88pgs.

Gate5, "Mobile Community Solution: Context-sensitive Application Suite for Mobile Communities," 2002; 3pgs.

Gate5, "Mobile Guide Solution: Context-sensitive Applications for PDA-based Mobile City and Travel Guides," 2002; 4pgs.

Int'l Preliminary Report on Patentability (IPRP); for Int'l Patent App. No. PCT/JP2004/000250 dated Jul. 5, 2005; 4pgs.

Kim, R., "Find Friends by Cell Phone/Loop! Application's GPS Program can Beam Map Location," SFGate; Nov. 14, 2006; 2pgs. Life360's Rule 50(a) Motion for Judgment as a Matter of Law; AGIS, Inc. v. Life360, Inc. (S.D. FI.); Mar. 12, 2015; 27pgs.

LocatioNet LBS Applications: MyMap description web page, published before 2004 upon information and belief; 13pgs.

LocatioNet Press Release: "LocatioNet Releases Ground Breaking Mass Market LBS Application Suite—LocatioNet MyMap," Mobile Location Services Congress; May 6, 2003; 2pgs.

Luna, L., "This Man Knows You Live . . . and Work and Play," Wireless Review; Sep. 1, 2002; pp. 24-32.

Meggers, J. and Sang-Bum Parl, A, "A Multimedia Communication Architecture for Handheld Devices," IEEE Paper 0-7803-4872-9/98, Sep. 8-11, 1998; pp. 1245-1249.

Memory Map Remote Tracking, available on the Internet at https://web.archive.org/web/20060202161013/hltp:l/memory-map.com/; 2pgs. Plaintiff Advanced Ground Information Systems, Inc.'s Motions in Limine; AGIS, Inc. v. Life360, Inc. (S.D. FI.); Feb. 19, 2015; 54pgs. PRNewswire, "Trimble GPS Technology Enables Seiko Epson; Communication Device and Wireless Data Service," accessed on the internet at: http://www.printthis.clickability.com/pt/cpt?expire=&title=Trimble+GPS+Technology+Enables+Seiko+Epson+Communication+Device+and+Wireless+Data+S...; downloaded Jun. 16, 2016; 4pgs.

The Gate5 system, which, upon information and belief, was sold and/or publicly used within the U.S. prior to 2004 and at least as early as 2002.

The LocatioNet system which, upon information and belief, was sold and/or publically used within the U.S. prior to 2004 and at least as early as 2003; 6pgs.

Östman, L., "A Study of Location-Based Services Including a Design and Implementation of an Enhanced Friend Finder Client with Mapping Capabilities," Lulea Tekniska Univeritet; Aug. 31, 2001; 63pgs.

Batayneh, Fahd A., Location Management in Wireless Data Networks. Apr. 21, 2006, 24pgs. Available on the Internet at https://www.cse.wustl.edu/~jain/cse574-06/ftp/wireless_location/index.html

DIGI, Remote Cellular TCP/IP to Rockwell Ethernet and Serial Devices. 37pgs.

IBM, Transmission Control Protocol / Internet Protocol. 2pgs. Available on the Internet at www.ibm.com/support/knowledgecenter/en/ssw_aix_61/com.ibm.aix.networkcomm/tcpip_intro.htm.

Kutscher, Dirk et al. Drive-thru Internet: IEEE 802.11b for "Automobile" Users. IEEE Infocom, Mar. 7, 2004. 12pgs.

Microsoft Corporation. Communication Services and Networking (Windows CE 5.0). 2006, 6pgs. Available on the Internet at https://msdn.microsoft.com/en-us/library/ms880996.aspx.

Ramjee, et al. IP-Based Access Network Infrastructure for Next-Generation Wireless Data Networks. IEEE Personal Communications, Aug. 2000. 8 pgs.

Toppila, Pekka. TCP/IP in Cellular Mobile Environment. 1999, 7pgs.

Zetter, Kim. How Attackers can Use Radio Signals and Mobile Phones to Steal Protected Data. Wired, Nov. 3, 2004 5pgs. Available on the Internet at www.wired.com/2014/11/airhopper-hack/.

"911 and E911 Services," Federal Communications Commission, updated Mar. 1, 2018, available at https://www.fcc.gov/general/9-1-1-and-e9-1-1-services (last visited May 7, 2018) (6 pages).

"AGIS Introduces Landmark Mobile Networking," dated Jun. 18, 2007, available as of Aug. 7, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070807202449/http://www.agisinc.com/AGIS_announcement.pdf (3 pages).

"AGIS Mobile Communication & Collaboration Software Being Used by Naval Coastal Warfare Squadron," available as of Aug. 7, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070807202431/http://www.agisinc.com/AGIS_US_Navy_photofeature.pdf (2 pages).

"BuddySpace Downloads," dated May 1, 2007, publication date unknown, available at: http://projects.kmi.open.ac.uk/buddyspace/downloads/downloads.html (3 pages).

"Cellular Mobile Pricing Structures and Trends," Organisation for Economic Co-operation and Development, Working Party on Telecommunications and Information Service Policies, May 16, 2000 (103 pages).

"Email," Wikipedia, https://en.wikipedia.org/wiki/Email (last visited May 10, 2018) (19 pages).

"Fact Sheet: FCC Wireless 911 Requirements," Federal Communications Commission, Jan. 2001, available at https://transition.fcc.gov/pshs/services/911-services/enhanced911/archives/factsheet_requirements 012001.pdf (4 pages).

"Force XXI Battle Command, Brigade and Below (FBCB2)," available as of Feb. 4, 2017 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20170204113146/http://www.dote.osd.mil/pub/reports/FY1999/pdf/army/99fbcb2.pdf (4 pages).

"Frequently Asked Questions," BuddySpace.org, available as of Apr. 23, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070423184018/http://kmi.open.ac.uk:80/projects/buddyspace/faq.html (11 pages). "Frequently Asked Questions," BuddySpace.org, available as of Feb. 3, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040204032758/

http://kmi.open.ac.uk:80/projects/buddyspace/faq.html (4 pages). "History of Mobile Phones," Wikipedia, https://en.wikipedia.org/wiki/History_of_Mobile_phones (last visited May 10, 2018) (14 pages).

"How It Works: The Navizon Wireless Positioning System," Navizon. com, available as of Feb. 19, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060219075647/http://www.navizon.com:80/FullFeatures. htm (8 pages).

"Introduction & Philosophy: Presence in a Nutshell," publication date unknown, available at: http://projects.kmi.open.ac.uk/buddyspace/intro-philosophy.html (3 pages).

"MMode Features: Find Friends," AT&T Wireless, available as of Jun. 18, 2003 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/20030618175223/http://www.attwireless.com:80/mmode/features/findit/FindFriends/(2 pages).

"Navizon: The first Peer-to-Peer Wireless Positioning System that successfully blends GPS +WiFi + Celluar signals together into one accurate and powerful Mobile Geo-Location System," Navizon. com, available as of Dec. 18, 2005 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20051218105454/http://www.navizon.com:80/index.htm (2 pages). "Palm VII," Wikipedia, https://en.wikipedia.org/wiki/Palm_VII (last visited May 10, 2018) (2 pages).

Page 5

(56) References Cited

OTHER PUBLICATIONS

"Simon Says 'Here's How!' Simon Mobile Communications Made Simple," Simon Users Manual, IBM Corp., copyright 1994 (41 pages).

"UCSD ActiveCampus," available as of Feb. 6, 2003 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/20030206012106/http://activecampus.ucsd.edu/ (3 pages).

"USCD Active Campus," available as of Aug. 29, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040829191734/http://activecampus.ucsd.edu/ (3 pages).

"Voice Over Internet Protocol (VoIP)," Federal Communications Commission, publication date unknown, updated at least as recently as May 13, 2009, available at https://www.fcc.gov/general/voice-over-internet-protocol-voip (last visited May 10, 2018) (11 pages). Active Campus, "ActiveCampus—Sustaining Educational Communities through Mobile Technology," copyright 2002, available as of Nov. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20041125060305/http://activecampus.edu:80/slides/active-campus-hpl (35 pages).

Active Campus, "New Features in Active Campus (Apr. 2003)," available as of Sep. 1, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060901101253/https://activecampus.ucsd.edu/new-features.php (3 pages).

AGIS, "AGIS First Responders, Mobile Online Group Collaboration," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070710230256/http://www.agisinc.com/FirstResponders.asp (2 pages).

AGIS, "Frequently Asked Questions About AGIS," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070710224856/http://www.agisinc.com/Faq.asp (3 pages).

AGIS, "Mobile Social Networking," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: http://web.archive.org/web/20070710224939/http://www.agisinc.com/Social Networking.asp (1 page).

AGIS, "Track and Collaborate with Your Entire Team," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: http://web.archive.org/web/20070710225045/http://www.agisinc.com/Business.asp (2 pages.).

Apple Newton, Wikipedia, https://en.wikipedia.org/wiki/Apple_Newton (last visited May 10, 2018) (10 pages).

APRS Working Group. "Automatic Position Reporting System: APRS Protocol Reference, Protocol Version 1.0," Aug. 29, 2000, available at: http://studylib.net/doc/18674143/aprs-protocol-specification (128 pages).

Baard, M. "A Connection in Every Spot," Wired News, Oct. 16, 2003, available at: https://web.archive.org/web/20031127042047/http://www.wired.com:80/news/print/0,1294,60831,00.html (3 pages). Bachler, M. et al. "Collaboration in the Semantic Grid: a Basis for e-Learning," publication date unknown, available at: http://oro.open.ac.uk/6202/1/aai_coakting-2005-preprint-krp.pdf (19 pages).

Bruninga, B. "APRS SPEC Addendum 1.1," publication date unknown, available at: http://www.aprs.org/aprs11.html (4 pages).

Bruninga, B. "APRS Tiny Web Pages," Sep. 2000, available at: http://aprs.org/TWP.html (7 pages).

Bruninga, B. "Automatic Packet/Position Reporting System (APRS)," dated Sep. 18, 2002, available at: http://aprs.org/APRS-docs/APRS. TXT (6 pages).

Bruninga, B. "Cellular Automatic Position Reporting System (APRS)", dated Jul. 7, 1999, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725024219/http://web.usna.navy.mil:80/~bruninga/APRS-docs/CELLULAR.TXT (1 page).

Bruninga, B. "Generic Callsigns for National APRS Events," dated Oct. 20, 2005, available at: http://aprs.org/aprs-jota.txt (1 page).

Bruninga, B. "Potential APRS Map of JOTA Contacts," publication date unknown, obtained from: http://www.aprs.org/cgsrvr.html (last visited Nov. 28, 2017) (4 pages).

Bruninga, B. "Tips for Mobile APRS Users," dated Jan. 2, 2004, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725035443/http://web.usna.navy.mil:80/~bruninga/APRS-docs/MOBILE.TXT (4 Pages).

Bruninga, B. "Touch Screen Display mods in APRStch.EXE," dated Apr. 17, 2000, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725034727/http:web.usna.navy.mil:80/~bruninga/APRS-docs/TOUCH.TXT (2 pages).

Carter, J. "Build an APRS Encoder Tracker," QST, Feb. 2002 (5 pages).

Charny, B. "Find a Wireless Friend—for a fee," Cnet, Jun. 24, 2002, available at: https://www.cnet.com/news/find-a-wireless-friend-for-a-fee/ (2 pages).

Charny, B. "New cell feature helps find friends," Cnet, Jun. 25, 2002, available at: https://www.cnet.com/news/new-cell-feaure-helps-find-friends/ (5 pages).

Chen, Ching-Chen et al. "Automatically and Accurately Conflating Satellite Imagery and Maps," In Proceedings of the International Workshop on Next Generation Geospatial Information, Oct. 2003 (4 pages).

Christie, Jock et al. "Development and Deployment of GPS Wireless Devices for E911 and Location Based Services," Position, Location and Navigation Symposium, Palm Springs California, Apr. 15-18, 2002 (6 pages).

Cohen, Deborah. "Digital note-passing gains respect among adults," USAToday.com, Nov. 26, 2004, available at: https://usatoday30.usatoday.com/tech/products/services/2004-11-26-im-gains-cred_x.htm (2 pages).

Conatser, J. et al. "Force XXI Battle Command Brigade and Below-Blue Force Tracking (FBCB2-BFT). A Case Study in the Accelerated Acquisition of a Digital Command and Control System during Operations Enduring Freedom and Iraqi Freedom," dated Dec. 2005, available at www.dtic.mil/dtic/tr/fulltext/u2/a443273. pdf (73 pages).

Curriculum Vitae of William Griswold, available at: https://cseweb.ucsd.edu/~wgg/CV.pdf (29 pages).

Definition of "Subnetting," Techopedia, available at https://www.techopedia.com/definition/28328/subnetting as of May 10, 2018 (2 pages).

Dunn, R.J. III. "Blue Force Tracking: The Afghanistan and Iraq Experience and Its Implications for the U.S. Army," Northrop Grumman, 2003, available at: http://www.northropgrumman.com/AboutUs/AnalysisCenter/Documents/pdfs/BFT-Afghanistan-and-Iraq-Exper.pdf (20 pages).

Durso, Fred. "A Decade of Difference," NFPA Journal, Sep. 1, 2011, available at https://www.nfpa.org/News-and-Research/Publications/NFPA-Journal/2011/September-October-2011/Features/A-Decade-of-Difference (6 pages).

Eisenstadt, M. et al. "BuddySpace: Enhanced Presence Management for Collaborative Learning, Working, Gaming and Beyond," submitted to JabberCon Europe 2002, publication date unknown, available at: https://pdfs.semanticsscholar.org/8f3d/d07b4e9f3095b949e78de9a2be439e98e663.pdf (6 pages).

Grier, Robin. "VoIP—How to Use It to Cut Costs and Enhance Radio Access," Radio Resource Magazine, Jul. 2000 (4 pages). Griswold, W. et al. "Active Campus—Sustaining Educational Communities through Mobile Technology," Technical Report CS2002-0714, University of California at San Diego, Jul. 2002, available at: https://pdfs.sematicsscholar.org/2de1/

e05b22889171425bca873a66fd9f19ecda0c.pdf (19 pages).

Griswold, W. et al. "ActiveCampus—Experiments in Community-Oriented Ubiquitous Computing," University of California at San Diego, published no later than Oct. 2004, available at https://cseweb.ucsd.edu/~wgg/Abstracts/ac-handhelds.pdf (8 pages).

Griswold, W. et al. "Using Mobile Technology to Create Opportunistic Interactions on a University Campus," Technical Report CS2002-0724, University of California at San Diego, Sep. 2002,

Page 6

(56)References Cited

OTHER PUBLICATIONS

available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10. 1.1.14.8249&rep=rep1&type=pdf (6 pages).

Hatfield, Dale N. "A Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services," provided to the Federal Communications Commission on Oct. 15, 2002, (54 pages).

Horzepa, S. "APRS: Moving Hams on Radio and the Internet; A Guide to the Automatic Reporting System," The American Radio Relay League, Inc., copyright 2004 (156 pages).

Horzepa, S. "High-Speed Digital and Multimedia Working Group is on," QST, Jun. 2002 (1 page).

Ion, Florence. "From touch displays to the Surface: A brief history of touchscreen technology," Arstechnica, https://arstechnica.com/ gadgets/2013/04/from-touch-displays-to-the-surface-a-brief-historyof-touchscreen-technology/, Apr. 4, 2013 (22 pages).

IPR2018-00817, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Apple Inc., Mar. 22, 2018 (85 pages). IPR2018-00818, Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, filed on behalf of Apple, Inc., Mar. 22, 2018 (86 pages). IPR2018-00819, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Apple, Inc., Mar. 22, 2018 (91 pages). IPR2018-00821, Petition for Inter Partes Review of U.S. Pat. No. 8,213,970, filed on behalf of Apple, Inc., Mar. 22, 2018 (85 pages). IPR2018-01079, Petition for Inter Partes Review of U.S. Pat. No. 8,213,970, filed on behalf of Google, LLC, May 15, 2018 (89 pages).

IPR2018-01080, Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, filed on behalf of Google LLC, May 15, 2018 (87 pages). IPR2018-01081, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (64

IPR2018-01082, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (72

IPR2018-01083, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (72

IPR2018-01084, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (82

IPR2018-01085, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (76

IPR2018-01086, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (82 pages).

IPR2018-01087, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (76

IPR2018-01088, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (83

Klabunde, Tim. "The Benefits of a VoIP Dispatch System," Mission Critical Communications, Aug. 2004 (3 pages).

Lehman, J. "APRS and Search and Rescue," QST, Sep. 2003 (3 pages).

Lehman, J. "ARPS and Search and Rescue-Part 2," QST, Oct. 2003 (3 pages).

McKinsey & Company. "Untitled Report," 2002 (133 pages). Mock, John H. et al. "A voice over IP solution for mobile radio interoperability," In Proceedings of IEEE 56th Vehicular Technology Conference, Sep. 2002 (4 pages).

Perkins, Charles E. "Ad Hoc Networking, An Introduction," Nokia Research Center, Nov. 28, 2000 (28 pages).

Rashbaum, William K. "Report on 9/11 Finds Flaws in Response of Police Dept," Jul. 27, 2002, available at https://www.nytimes.com/ 2002/07/27/nyregion/report-on-9-11-finds-flaws-in-response-ofpolice-dept.html (4 pages).

Rotondo, Rick. "Locate-Track-Extract, Wireless Mesh Networking Allows Commanders to Keep Track of Firefighters at an Incident Scene," Public Safety Report, Mar. 2004 (3 pages).

Shareloc's Blog. "In Case You Were Wondering, We've Been Working . . . ," Navizon.com, available as of Feb. 20, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060220062317/http://navizon. typepad.com:80/(7 pages).

Sharp, Duncan Scott. "Adapting Ad Hoc Network Concepts to Land Mobile Radio Systems," Thesis, Master of Engineering, University of Alberta, copyright Dec. 2002 (98 pages).

Simon, S. "The Pocket PC Goes Tactical," Law Enforcement Technology, May 2006, obtained from: https://web.archive.org/web/ 20070807202413/http://www.agisinc.com/Eprint_AGIS_4pg.pdf (4 pages).

Subbarao, Madhavi. "Mobile Ad Hoc Data Networks for Emergency Preparedness Telecommunications-Dynamic Power-Conscious Routing Concepts," Wireless Communications Technologies Group, Submitted as an interim project report on Feb. 1, 2000 (16 pages).

The ActiveCampus System, alleged in adverse proceedings to have been made available to the public no later than Oct. 30, 2005 by the University of California San Diego.

The AGIS LifeRing Project and its prototypes, alleged in adverse proceedings to have been made available to the public by Oct. 30, 2005 by AGIS.

The AT&T Find Friends System, alleged in adverse proceedings to have been made available to the public no later than Jun. 24, 2002 by AT&T.

The Automatic Packet/Position Reporting System, alleged in adverse proceedings to have been made available to the public no later than Sep. 21, 2004 by Bob Bruninga.

The BuddySpace system, alleged in adverse proceedings to have been made available to the public at least by Jun. 2002 and no later than Sep. 21, 2004 by the Open University.

The Force XXI Battle Command, Brigade and Below System, alleged in adverse proceedings to have been made available to the public no later than Mar. 21, 2003 by the U.S. Army.

The Navizon System, alleged in adverse proceedings to have been made available to the public at least by Oct. 30, 2005 and no later than Feb. 20, 2006 by Navizon Inc.

Trupiano, Michael. "A Taxonomy for Assessing Fitness of Mobile Data Services in US Consumer Markets," Thesis, Master of Engineering, submitted to Massachusetts Institute of Technology on Feb. 1, 2001 (105 pages).

Vogiazou, Y. et al. "BuddySpace: Large-Scale Presence for Communities at Work and Play," Tech Report KMi-03-14, dated Sep. 2003 (8 pages).

Vogiazou, Y. et al. "From Buddyspace to CitiTag: Large-Scale Symbolic Presence for Community Building and Spontaneous Play," Tech Report KMi-04-25, dated Nov. 2004 (8 pages).

Vriendt, Johan De. et al. "Mobile Network Evolution: A Revolution on the Move," IEEE Communications Magazine, Apr. 2002 (8 pages).

Defendant's Disclosure Pursuant to Patent Local Rule 4-2 of Preliminary Claim Constructions and Extrinsic Evidence, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), May 18, 2018 (27 pages).

P.R. 4-3—Joint Claim Construction and Prehearing Statement, filed in AGIS Software Development LLC v. Huawei Device USA, Inc. on Jun. 15, 2018 (9 pages).

Appendix 1 to P.R. 4-3—Joint Claim Construction and Prehearing Statement—Parties' Proposed Constructions and Supporting Evidence, filed in AGIS Software Development LLC v. Huawei Device USA, Inc. on Jun. 15, 2018 (131 pages).

Patent Owner's Preliminary Response, filed in IPR 2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Jul. 5, 2018 (53 pages).

Patent Owner's Preliminary Response, filed in IPR 2018-00818 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Jul. 5, 2018 (38 pages).

Page 7

(56) References Cited

OTHER PUBLICATIONS

Patent Owner's Preliminary Response, filed in IPR 2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Jul. 24, 2018 (50 pages).

P.R. 4-3—Updated Joint Claim Construction and Prehearing Statement, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jul. 23, 2018 (9 pages).

Appendix 1 to P.R. 4-3—Updated Joint Claim Construction and Prehearing Statement—Parties' Proposed Constructions and Supporting Evidence, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jul. 23, 2018 (125 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Oct. 3, 2018 (34 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Aug. 10, 2018 (7 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-00818 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Oct. 3, 2018 (33 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00818 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Aug. 10, 2018 (7 pages).

Patent Owner's Preliminary Response, IPR2018-00819 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Aug. 9, 2018 (51 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00819 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Aug. 10, 2018 (7 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Aug. 10, 2018 (7 pages).

Patent Owner's Preliminary Response, IPR2018-01079 (Google LLC v. AGIS Software Development LLC, U.S. Pat. No. 8,213,970), Aug. 23, 2018 (59 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01079 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Sep. 19, 2018 (8 pages).

Patent Owner's Preliminary Response, IPR2018-01080 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Sep. 6, 2018 (41 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01080 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), Oct. 17, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01081 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Sep. 13, 2018 (43 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01081 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Sep. 19, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01082 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Aug. 23, 2018 (38 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01082 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Sep. 19, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01083 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Oct. 11, 2018 (42 pages).

Motorola Solutions, Dispatch Console Accessories, 2018 (3 pages). Patent Owner's Preliminary Response, IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Oct. 11, 2018 (32 pages).

Patent Owner's Preliminary Response, IPR2018-01085 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Aug. 23, 2018 (49 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01084 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Sep. 19, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01086 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Sep. 6, 2018 (53 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01086 (*Google LLC v. AGIS Software Development LLC;* U.S. Pat. No. 9,467,838), Oct. 17, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Oct. 11, 2018 (39 pages).

Patent Owner's Preliminary Response, IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Sep. 12, 2018 (43 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01088 (*Google LLC v. AGIS Software Development LLC;* U.S. Pat. No. 9,467,838), Oct. 17, 2018 (9 pages).

Defendants' Disclosure Pursuant to Patent Local Rule 4-1 of Proposed Terms and Claim Elements for Construction, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Apr. 27, 2018 (16 pages).

Petition for Inter Partes Review of U.S. Pat. No. 9,749,829, IPR-01471, filed on behalf of Apple, Inc., Jul. 31, 2018 (85 pages).

Apple's First Amended Answer to Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 148 in Case 2:17-cv-513, Jun. 15, 2018 (23 pages).

Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 165 in Case 2:17-cv-513, Jul 26,2018 41 pages.

Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175 in Case 2:17-cv-513, Aug. 14, 2018 (56 pages).

Plaintiff AGIS Software Development LLC's Reply Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 186 in Case 2:17-cv-513, Aug. 20, 2018 (29 pages)

Joint Claim Construction Chart Pursuant to PR. 4-5(D), filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 194 in Case 2:17-cv-513, Aug. 27, 2018 (4 pages)

Declaration of Dr. Jaime G. Carbonell in Support of Plaintiff's Opening Claim Construction Brief; Exhibit H to Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 165-10 in Case 2:17-cv-513, Jul. 26,2018 (43 pages)

Declaration of Dr. Benjamin Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 8,213,970; Exhibit 1 to Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Case 2:17-cv-513, Jul. 26, 2018 (148 pages)

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 8,213,970; Exhibit J to Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Case 2:17-cv-513, Jul. 26, 2018 (124 pages)

Declaration of Kerri-Ann Limbeed in Support of Defendants' Responsive Claim Construction Brief; Attachment #1 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-1 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages)

Oxford American Dictionary of Current English, 1999 (p. 213); Exhibit 3 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-4 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages).

Webster's New World Dictionary of Computer Terms, Eighth Edition, 2000 (p. 157); Exhibit 4 to Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v.

Page 8

(56) References Cited

OTHER PUBLICATIONS

Huawei Device USA Inc. et al. (E.D. Texas), Document 175-5 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages)

Microsoft Computer Dictionary, Fifth Edition, 2002 (p. 502); Exhibit 12 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-13 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages)

3G TS 23.040 V1 .0.0 (May 1999) Technical Specification (p. 6); Exhibit 20 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-21 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages)

Microsoft Computer Dictionary, Fifth Edition, 2002 (p. 479); Exhibit 21 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-22 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages)

Declaration of Chris G. Bartone, Ph.D., PE. in Support of Defendants Huawei Device USA Inc. et al.'s Responsive Claim Construction Brief, Attachment #23 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-23 in Case 2:17-cv-513, Aug. 14, 2018 (105 pages)

Appendix A: Comparison of Method and "Device" Claims; Attachment #24 to Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175-24 in Case 2:17-cv-513, Aug. 14, 2018 (7 pages)

Appendix B: Comparison of '838 Patent Disclosures and Similar Disclosures in '728 Patent; Attachment #25 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-25 in Case 2:17-cv-513, Aug. 14, 2018 (3 pages)

HTC Corporation et al.'s PriorArt Listed in Their Invalidity Contentions, *AGIS Software Development LLC v. HTC Corporation et al.* (E.D. Texas), Case 2:17-cv-514, Aug. 30, 2018 (7 pages)

PriorArt Listed in LG Electronics' Invalidity Contentions, AGIS Software Development LLC v. LG Electronics, Inc. et al. (E.D. Texas), Case 2:17-cv-514, Aug. 30, 2018 (9 pages)

Index of Exhibits to Apple's Invalidity Contentions, *AGIS Software Development LLC* v. *LG Electronics, Inc. et al.* (E.D. Texas), Case 2:17-cv-516, Dec. 1, 2017 (11 pages)

Appendix A: Joint Claim Construction Chart; Attachment #1 to Joint Claim Construction Chart Pursuant to P.R. 4-5(D), filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 194 in Case 2:17-cv-513, Aug. 27, 2018 (118 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, Exhibit 1002 in IPR2018-00817 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Mar. 22, 2018 (153 pages).

Exhibit 1010 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/711,490 and U.S. Appl. No. 11/308,648") in IPR2018-00817, Mar. 22, 2018 (94 pages).

Exhibit 1011 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/711,490 and U.S. Appl. No. 11/615,472") in IPR2018-00817, Mar. 22, 2018 (122 pages).

Exhibit 1012 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/615,472 and U.S. Appl. No. 12/761,533") in IPR2018-00817, Mar. 22, 2018 (94 pages).

Exhibit 1017 ("Computer-generated document comparison showing differences in U.S. Appl. No. 14/027,410 and U.S. Appl. No. 11/308,648") in IPR2018-00817, Mar. 22, 2018 (117 pages).

GeoTIFF Format Specification, GeoTIFF Revision 1.0, Specification Version 1.8.1, Oct. 31, 1995 (102 pages); Exhibit 1018 in IPR2018-00817.

Hornback, K. et al. Navigation Patterns and Usability of Zoomable User Interfaces with and without an Overview. ACM Transactions on Computer-Human Interaction, v. 9, n. 4, Dec. 2002 (pp. 362-369; Exhibit 1019 in IPR2018-00817.

MapInfo. Spatially Enhancing Business Data with Geocoding Solutions: A MapInfo White Paper, 1997 (15 pages); Exhibit 1020 in IPR2018-00817.

MapInfo Professional User's Guide Version 7.0, 2012 (752 pages); Exhibit 1021 in IRP2018-00817.

Python Documentation Release 2.0 Homepage, Oct. 16, 2000 (1 page); Exhibit 1022 in IPR2018-00817.

Python Library Reference, Section 7.2 Socket (4 pages); Exhibit 1023 in IRP2018-00817.

Mockapetris, P. Network Working Group of Internet Engineering Task Force, Request for Comments 1034, Domain Names—Concepts and Facilities, Nov. 1987 (55 pages); Exhibit 1024 in IPR2018-00817.

Claim Construction Order, issued in *Automated Packaging Systems, Inc. v. Free Flow Packaging International, Inc.* (N.D. Cal.), Document 217 in Case 3:18-cv-356, Aug. 2, 2018 (44 pages); Exhibit 1025 in IPR2018-00817.

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, Exhibit 1002 in IPR2018-00818 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), Mar. 22, 2018 (115 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, Exhibit 1002 in IPR2018-00819 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,0838), Mar. 22, 2018 (186 pages).

Apple Computer, Inc. Macintosh Human Interface Guidelines, 1992 (410 pages); Exhibit 1009 in IRP2018-00821 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 8,213,970.

Bederson, Benjamin B. Fisheye Menus. Proceedings of the ACM Symposium on User Interface Software and Technology, 2000 (pp. 217-225); Exhibit 1015 in IPR2018-00821.

Norman, Donald A. The Psychology of Everyday Things, Chapter 1, The Psychopathology of Everyday Things, 1999 (pp. 1-33); Exhibit 1016 in IPR2018-00821.

Nielsen, J. Usability Engineering, 1993 (pp. 129-148); Exhibit 1017 in IPR2018-00821.

Shneiderman, B. Designing the User Interface: Strategies for Effective Human-Computer Interaction, Third Edition, 1998 (252 pages); Exhibit 1018 in IPR2018-00821.

Ball, D. et al. How to Do Everything with Your Treo 600, 2004 (pp. 25-30); Exhibit 1019 in IPR2018-00821.

Exhibit 1020 in IPR2018-00821 ("Redline comparison between the specifications of U.S. Appl. No. 11/612,830 and U.S. Pat. No. 8,213,970"), Mar. 22, 2018 (90 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,749,829, Exhibit 1002 in IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jul. 31, 2018 (114 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,408,055; Exhibit 1003 in IPR2018-01080 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), May 15, 2018 (138 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01081 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (93 pages).

Exhibit 1009 in IPR2018-01081 ("Microsoft Word document compare of specifications between U.S. Pat. No. 7,630,724 to Beyer, Jr. et al. and U.S. Pat. No. 7,031,728 to Beyer, Jr. et al."), May 15, 2018 (33 pages) 10.

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01082 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), May 15, 2018 (102 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01083 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (105 pages).

Page 9

(56) References Cited

OTHER PUBLICATIONS

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (116 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01085 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (102 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01086 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (111 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01087 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (106 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (125 pages).

Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple, Inc.* (E.D. Texas), Document 32 in Case 2:17-cv-516, Sep. 18, 2017; also Exhibit 1013 in IPR2018-00817 (33 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in *AGIS Software Development LLC v. Apple, Inc.* (E.D. Texas), Case 2-17-cv-516; also Exhibit 1014 in IPR2018-00817, Mar. 22, 2018 (120 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *HTC Corp.* (E.D. Texas), Document 1 in Case 2:17-cv-514, Jun. 21, 2017; also Exhibit 1015 in IPR2018-00817 (24 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC v. Apple Inc.* (E.D. Texas), Case 2:17-cv-516, Sep. 18, 2017; also Exhibit 1016 in IPR2018-00817 (12 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in *AGIS Software Development LLC v. Apple, Inc.* (E.D. Texas), Case 2:17-cv-516; also Exhibit in IPR2018-00819, Mar. 22, 2018 (381 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in *AGIS Software Development LLC* v. *Apple. Inc.* (E.D. Texas), Case 2:17-cv-516, also Exhibit 1008 in IPR2018-00821, Mar. 22, 2018 (39 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against HUAWEI Accused Products; Attachment to Plaintiff's Infringement Contentions in *AGIS Software Development LLC v. Huawei Device USA Inc., et al.* (E.D. Texas), Case 2:17-cv-513; also Exhibit 1010 in IPR2018-01080, May 15, 2018 (889 pages).

Claim Construction Memorandum and Order, issued in *AGIS Software Development LLC* v. *Huawei Device USA Inc., et al.* (E.D. Texas), Document 205 in Case 2:17-cv-513, Oct. 10, 2018; also Exhibit 1041 in IPR2018-01080 (60 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc.*, et al. (E.D. Texas), Document 2 in Case 2:17-cv-513, Jun. 21, 2017; also Exhibit 1008 in IPR2018-01081 (24 pages).

Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 32 in Case 2:17-cv-513, Aug. 17, 2017 (26 pages).

Defendents Huawei Device USA Inc. et al.'s Answer to Plaintiff's First Amended Complaint for Patent Infringement, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 29 in Case 2:17-cv-513, Oct. 5, 2017 (20 pages).

Plaintiff's Original Complaint Infringement, filed in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), Document 1 in Case 2:17-cv-515, Jun. 21, 2017 (24 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple, Inc.* (E.D. Texas), Document 1 in Case 2:17-cv-516, Jun. 21, 2017 (26 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *ZTE Corp. et al.* (E.D. Texas), Document 1 in Case 2:17-cv-517, Jun. 21, 2017 (25 pages).

Apple's Answer to AGIS's Original Complaint For Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple Inc.* (E.D. Texas), Document 20 in Case 2:17-cv-516, Aug. 28, 2017 (14 pages).

Apple's Answer to Plaintiff's First Amended Complaint For Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple Inc.* (E.D. Texas). Document 36 in Case 2:17-cv-516, Oct. 2, 2017 (16 pages).

Plaintiff's First Amended Complaint for Patnet Infringement, filed in *AGIS Software Development LLC* v. *ZTE Corp. et al.* (E.D. Texas), Document 32 in Case 2:17-cv-517, Oct. 17, 2017 (33 pages).

HTC Corporation's Answer, Defenses, and Counterclaims to AGIS Software Development, LLC's Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *HTC Corp. Inc.* (E.D. Texas), Document 82 in Case 2:17-cv-514, Oct. 12, 2018 (19 pages).

Defendent LG Electronics Inc.'s Answer to Plaintiff's Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), Document 83 in Case 2:17-cv-514, Oct. 12, 2018 (22 pages).

Decision: Institution of Inter Partes Review, IPR2018-01079 (*Google LLC v. AGIS Software Development LLC*; U.S Pat. No. 8,213,970), Nov. 20, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01081 (Google LLC v. AGIS Software Development LLC; U.S Pat. No. 9,445,251), Nov. 20, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01082 (*Google LLC* v. *AGIS Software Development LLC*; U.S Pat. No. 9,445,251), Nov. 20, 2018 (39 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01085 (*Google LLC* v. *AGIS Software Development LLC*; U.S Pat. No. 9,467,838), Nov. 19, 2018 (22 pages).

Patent Owner's Preliminary Response, IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Nov. 28, 2018 (24 pages).

ZTE (USA) Inc., and ZTE (TX), Inc.'s Second Edition of Prior Art References, *AGIS Software Development LLC v. ZTE Corp. et al.* (E.D. Texas), 2:17-cv-514, Aug. 29, 2018 (7 pages).

HTC Corporation's Preliminary Election of Prior Art References, *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), 2:17-cv-514, Apr. 30, 2018 (6 pages).

Defendents Huawei Devices USA Inc. et al.'s Preliminary Election of Prior Art References, AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), 2:17-cv-513, Apr. 30, 2018 (7 pages).

Apple Inc.'s Final Election of Prior Art References, *AGIS Software Development LLC v.Apple Inc.* (E.D. Texas), 2:17-cv-513, Aug. 29, 2018 (15 pages).

Claim Construstion Hearing Before the Honerable Chief Judge Rodney Gilstrap (United States District Judge), *AGIS Software Development LLC v. Huawei Device USA Inc. et. al.* (E.D. Texas), 2:17-cv-513, Sep. 13, 2018 (109 pages).

Plaintiff's Disclosure of Assorted Claims and Infringement Contentions, AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), 2:17-cv-513, Nov. 28, 2017 (18 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against Huawei Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Case 2:17-cv-513, Nov. 28, 2017 (36 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against Huawei Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims

Page 10

(56) References Cited

OTHER PUBLICATIONS

and Infringement Contentions in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Case 2:17-cv-513, Nov. 28, 2017 (314 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against Huawei; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *Huawei Devce USA Inc. et al.* (E.D. Texas), Case 2:17-cv-513, Nov. 28, 2017 (312 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (16 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (36 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (902 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (335 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against LG; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (329 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC v. HTC Corp.* (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (23 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against HTC Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (42 pages). Exhibit B for U.S. Pat. No. 9,408,055 Against HTC Accused Products: Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (979 pages). Exhibit C for U.S. Pat. No. 9,445,251 Against HTC Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (313 pages). Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against HTC; Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (20 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (41 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. ZTE Corp et al. (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (1001 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (314 pages).

Exhibit D—Claims Chart for U.S. Pat. No. 9,467,838 Against ZTE; Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC v. ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (329 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC* v. *ZTE Corp. et al.* (E.D. Texas), 2:17-cv-517, Aug. 28, 2018 (21 pages).

Defendent Apple's Amended Patent Rule 3-3 Invalidity Contentions, *AGIS Software Development LLC v. Huawei Device USA Inc.* et al. (E.D. Texas), 2:17-cv-513, Apr. 16, 2018 (49 pages).

Decision: Institution of Inter Partes Review, IPR2018-00819 (Apple Inc. v. AGIS Software Development LLC; U.S Pat. No. 9,467,838), Nov. 7, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IRP2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Oct. 23, 2018 (35 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IRP2018-01083 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Nov. 1, 2018 (9 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IRP2018-01085 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Sep. 19, 2018 (9 pages).

Corrected Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (76 pages).

Exhibit 1031 in IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Transcript of teleconference between Board and Parties, Oct. 26, 2018 (22 pages).

Exhibit 1032 in IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Document showing differences between Petition and Corrected Petition in redline, Oct. 31, 2018 (77 pages).

Petitioner's Motion Under 37 C.F.R. § 42.104(C) to Corrected Clerical Errors in the Petition, ISPR2018-01087 9Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (7 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 1, 2018 (6 pages).

Patent Owner's Supplemental Preliminary Response to Petition for Inter Partes Review, IPR2018-01087 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 7, 2018 (6 pages).

Corrected Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (83 pages).

Exhibit 1032 in IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Document showing differences between Petition and Corrected Petition in redline, Oct. 31, 2018 (84 pages).

Petitioner's Motion Under 37 C.F.R. § 42.104(C) to Correct Clerical Errors in the Petition, IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), PCT. 31, 2018 (7 pages).

Patent Owner's Supplemental Preliminary Response to Corrected Petition for Inter Partes Review, IPR2018-01088 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 7, 2018 (6 pages).

Joint Motion to Stay All Deadlines and Notice of Settlement and Regarding Huawei Defendents, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 221 in Case 2:17-cv-513, Nov. 5, 2018 (6 pages).

Plaintiff/Counterclaim-Defendant AGIS Software Development LLC Answer to Declaratory Judgement Conterclaims of Defendent/Counterclaim-Plaintiff HTC Corporation, filed in *AGIS Software Development LLC v. HTC Corp. et al.* (E.D. Texas), Document 86 in Case 2:17-cv-514, Nov. 2, 2018 (8 pages).

Decision Instituting Inter Partes Review, IPR2018-01080 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), Dec. 4, 2018 (38 pages).

Page 11

(56) References Cited

OTHER PUBLICATIONS

Decision Denying Institution Inter Partes Review, IPR2018-01086 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Dec. 4, 2018 (23 pages).

Decision Denying Institution Inter Partes Review, IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Dec. 10, 2018 (30 pages).

Exhibit 3001 in IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), PTAB Conference Call, Dec. 18, 2018 (26 pages).

Joint Statement of Stipulation Regarding Clain Construction, filed in AGIS Software Development LLC v. HTC Corp. et al. (E.D. Texas), Document 91 in Case 2:17-cv-514, Dec. 8, 2018 (5 pages). Claim Construction Order, filed in AGIS Software Development LLC v. HTC Corp. et al. (E.D Texas), Document 93 in Case 2:17-cv-514, Dec. 18, 2018 (2 pages).

Rebuttal Expert Report of Joseph C. McAlexander III Regarding Validity of U.S. Pat. No. 8,213,970; 9,408,055; 9,445,251; 9,467,838; and 9,749,829, IPR2018-01471 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,749,829), Jan. 10, 2019 (400 pages). Decision Denying Institution of Inter Partes Review, IPR2018-

01083 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Jan. 10, 2019 (29 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Jan. 9, 2019 (27 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Jan. 9, 2019 (28 pages).

Decision: Institution of Inter Partes Review, IPR2018-01471 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,749,829), Feb. 27, 2019 (29 pages).

Order: Conduct of the Proceeding, IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 3, 2019 (4 pages).

Petitioner's Reply to Patent Owner's Preliminary Response Pursuant to Board's Order (Paper 7), IPR 2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 10, 2019 (11 pages).

Patent Owner's Sur-Reply to Petitioner's Reply, IPR 2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 18, 2019 (9 pages).

* cited by examiner

May 21, 2019

Sheet 1 of 7

US 10,299,100 B2

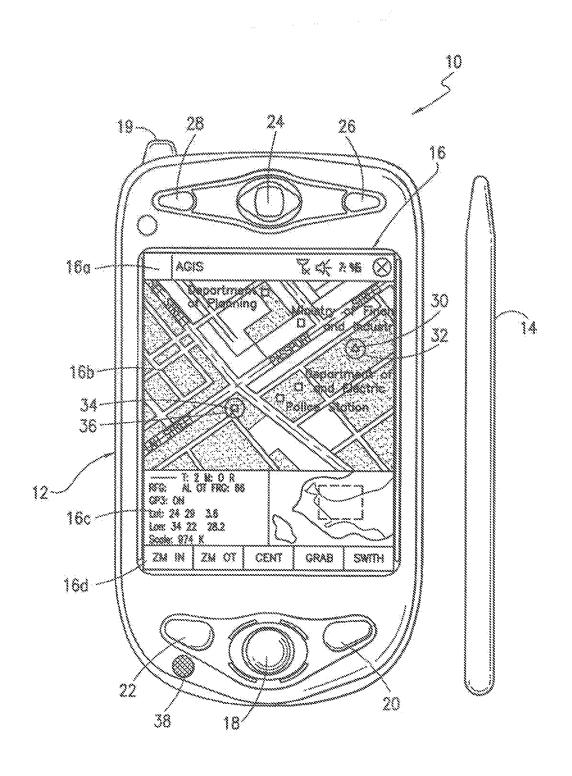
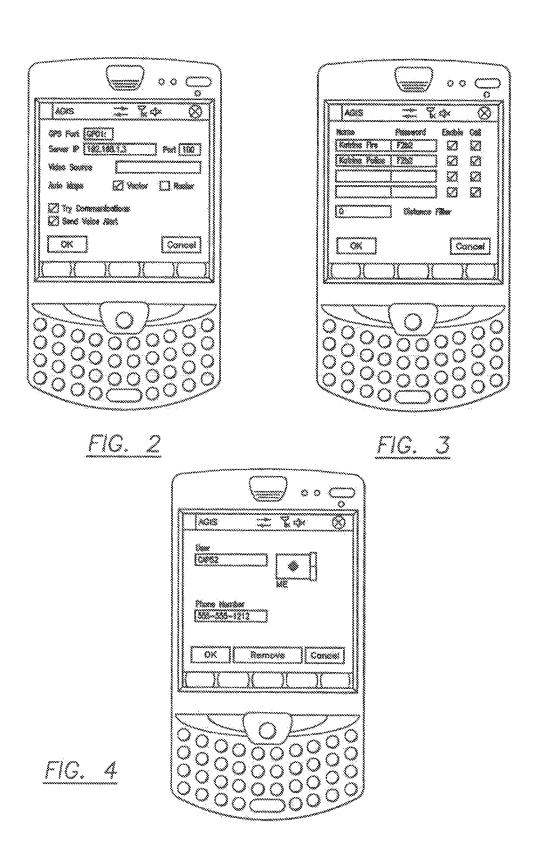


FIG. 1

May 21, 2019

Sheet 2 of 7

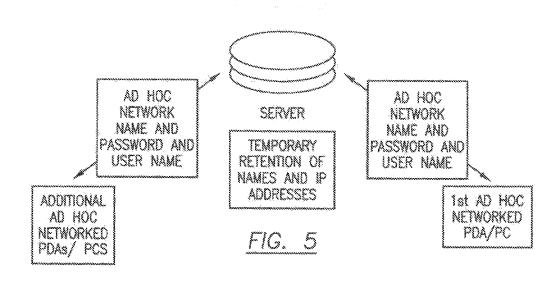
US 10,299,100 B2

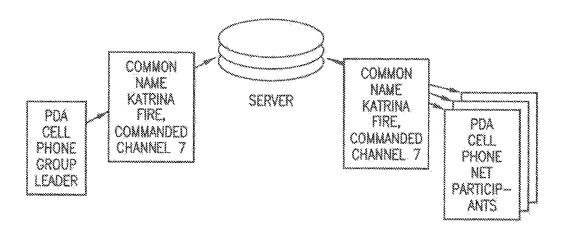


May 21, 2019

Sheet 3 of 7

US 10,299,100 B2





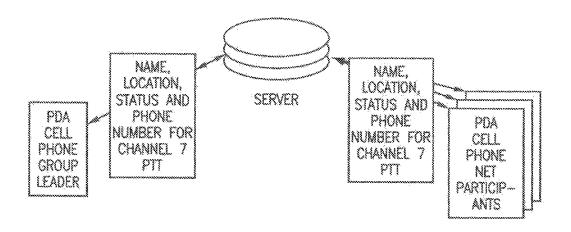
LEADER SIGNS ON TO THE AD HOC PASSWORD PROTECTED KATRINA FIRE NETWORK AND ENTERS A PTT GROUP CHANNEL. AS NET PARTICIPANTS SIGN ON TO THE AD HOC PASSWORD PROTECTED KATRINA FIRE NETWORK THEY RECEIVE A PTT GROUP DESIGNATOR. THEIR PDA AUTOMATICALLY USES THE PTT DATA TO SHIFT TO THE COMMANDED VOICE CHANNEL.

FIG. 6

May 21, 2019

Sheet 4 of 7

US 10,299,100 B2



LEADER RECEIVES THE PTT NAME
LOCATION, STATUS AND PPT
CHANNEL 7 PHONE NUMBER AS EACH
AD HOC PASSWORD PROTECTED
KATRINA FIRE NETWORK UNIT REPORTS

AS NET PARTICIPANTS REPORT IN THE AD HOC PASSWORD PROTECTED KATRINA FIRE NETWORK THEY TRANSMIT THER NAME, LOCATION, STATUS AND PTT PHONE NUMBER. ALL ON THE KATRINA FIRE NETWORK RECEIVE ALL OTHERS' DATA

FIG. 7

U.S. Patent May 21, 2019 Sheet 5 of 7

US 10,299,100 B2

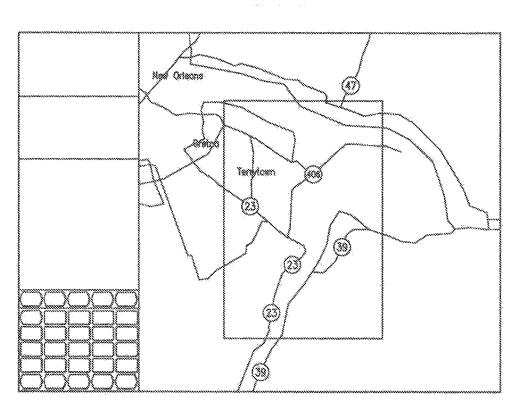
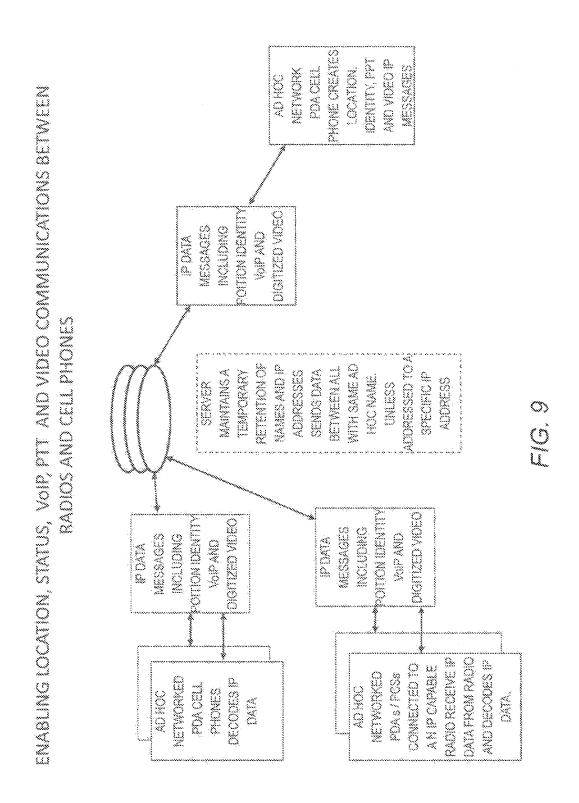


FIG. 8

May 21, 2019

Sheet 6 of 7

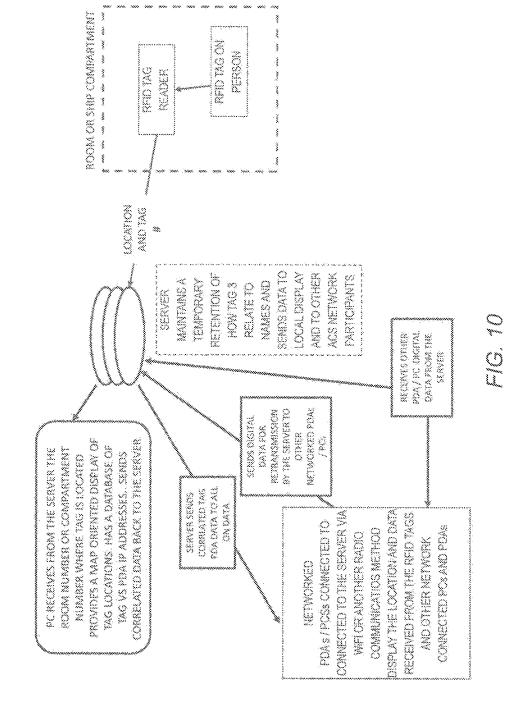
US 10,299,100 B2



May 21, 2019

Sheet 7 of 7

US 10,299,100 B2



ENABLING NON RFID EQUIPPED PDA PHONES TO RECEIVE RFID TAG DATA

55

1

METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 15/469,469, on Mar. 24, 2017, which is a continuation of U.S. patent application Ser. No. 15/287,638, 10 on Oct. 6, 2016, now U.S. Pat. No. 9,706,381 issued on Jul. 11, 2017, which is a continuation of U.S. patent application Ser. No. 14/529,978, filed on Oct. 31, 2014, now U.S. Pat. No. 9,467,838 issued Oct. 11, 2016, which is a continuationin-part of U.S. patent application Ser. No. 14/027,410, filed on Sep. 16, 2013, now U.S. Pat. No. 8,880,042 issued Nov. 4, 2014, which is a continuation of U.S. patent application Ser. No. 13/751,453, filed Jan. 28, 2013, now U.S. Pat. No. 8,538,393 issued Sep. 17, 2013, which is a continuation-inpart of U.S. patent application Ser. No. 12/761,533 filed on 20 Apr. 16, 2010, now U.S. Pat. No. 8,364,129 issued Jan. 29, 2013, which is a continuation-in-part of U.S. patent application Ser. No. 11/615,472 filed on Dec. 22, 2006, now U.S. Pat. No. 8,126,441 issued on Feb. 28, 2012, which is a continuation-in-part of U.S. patent application Ser. No. 25 11/308,648 filed Apr. 17, 2006, now U.S. Pat. No. 7,630,724 issued on Dec. 8, 2009, which is a continuation-in-part of U.S. patent application Ser. No. 10/711,490, filed on Sep. 21, 2004, now U.S. Pat. No. 7,031,728 issued on Apr. 18, 2006. All of the preceding applications are incorporated herein by 30 reference in their entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

A communications method and system using a plurality of cellular phones each having an integrated Personal Digital Assistant (PDA) and Global Positioning System (GPS) receiver for the management of two or more people through 40 the use of a communications network. The method and system provide each user with an integrated handheld cellular/PDA/GPS/phone that has Advanced Communication Software application programs (hereinafter referred to as ACS) and databases used in conjunction with a remote 45 Server that enable a user to quickly establish a communication network of cell phone participants having a common temporary ad hoc network using mobile wireless communication devices.

The invention includes a method and communication ⁵⁰ system to quickly set up and provide ad hoc, password protected, digital and voice networks to allow a group of people to be able to set up a network easily and rapidly, especially in an emergency situation.

Description of Related Art

The purpose of a communications system is to transmit digital messages from a source, located at one point, to user destination(s), located at other point(s) some distance away. 60 A communications system is generally comprised of three basic elements: transmitter, information channel and receiver. One form of communication in recent years is cellular phone telephony. A network of cellular communication systems set up around an area such as the United 65 States allows multiple users to talk to each other, either on individual calls or on group calls. Some cellular phone

2

services enable a cellular phone to engage in conference calls with a small number of users. Furthermore, cellular conference calls can be established through 800 number services. Cellular telephony also now includes systems that include GPS navigation that utilizes satellite navigation. These devices thus unite cellular phone technology with navigation information, computer information transmission and receipt of data.

The method and operation of communication devices used herein are described in U.S. Pat. No. 7,031,728 which is hereby incorporated by reference and U.S. Pat. No. 7,630,724.

Military, first responder, and other public and private emergency groups need to be able to set up ad hoc digital and voice networks easily and rapidly. These private networks may be temporary or longer lasting in nature. The users need to be able to rapidly coordinate their activities eliminating the need for pre-entry of data into a web and or identifying others by name, phone numbers or email addresses so that all intended participants that enter the agreed ad hoc network name and password are both digitally and voice interconnected. When a user or users leave the network, no data concerning the network participants need be retained.

Coordinating different organizations at the scene of a disaster presents several problems as there are voice and digital data (text messages) communications that need to be constantly occurring up and down the chain of command. As an example, communications are required from a police chief to a police captain to a police lieutenant to a police sergeant to a policeman and then back up the same chain of command. Digital data exchange of GPS data or other means provides the location component of the units. Digital chat, text messages, white boards and photo video exchange provide extensive collaboration. However, during a disaster, other first responders such as fire departments must become engaged. While the fire department users may have voice and digital data (text messages) communications up and down their chain of command, these individuals do not have the ability to cross communicate necessarily with police units without a substantial degree of immediate coordination. The method and system in accordance with the present invention described herein discloses how digital communications along with Personal Computer (PC) and PDA devices can be used to quickly establish user specific password protected private ad hoc voice and data networks to enable both data and voice communications up and down their chain of command and simultaneously with different, not pre-known, organizations responding to a disaster. The invention defines a method of accomplishing this by providing all personnel that need to communicate with each other with a PC or PDA which are interconnected to a Server using cellular or other communications.

SUMMARY OF THE INVENTION

Applicant's communication system and method described herein is embodied in the Advanced Communication Software (ACS) application programs developed by applicant and installed in the integrated PDA/GPS cell phones used herein and remote Servers.

A plurality of Internet Protocol (IP) capable PDA/GPS devices each having ACS application programs and databases provides a communication network in conjunction with a remote Server that provides the ability to: a) establish an ad hoc network of devices so that the devices can either broadcast to a group or selectively transmit to each of the

50

other; each PDA/GPS phone starts by requesting access to the Server and identifying a mutually agreed to network name and password and once granted, reports its GPS position and status; the Server then routes the data to all signed on network participants so that each of the devices 5 exchange location, status and other information; (b) force the received information to the recipient's display and enable the recipient to acquire additional information by touching the display screen at a remote phone's location on the PDA display; (c) make calls to or send data to remote 10 phones by touching their display symbols and selecting the appropriate soft switch; (d) layer a sufficient number of soft switches or buttons on the PDA display to perform the above functions without overlaying the map; and (e) allow a polling mode in each cell phone that permits a user to 15 contact other cell phone users that have a common interest or relationship with a password and identifier for communication and to establish quickly a temporary ad hoc network

3

A communication Server acts as a forwarder for IP 20 communications between any combination of cell phone/ PDA users and/or PC based users. Network participant location, identity and status messages are sent to the Server by each user. Network participant entered tracks are also sent to the Server. Because this network participant location 25 and track data is of interest to all the network participants, the Server forwards the data received from one participant to all other participants, causing their displays automatically, without any operator action, to display the received information, thus providing the information necessary for all 30 network participants to know the identity, location and status of all other network participants.

especially in an emergency.

The Server also acts as a forwarder of data addressed from one participant to one or more addressed participants, thus permitting the transmission of free text, preformatted mes- 35 sages, photographs, video, Email and Uniform Resource Locator (URL) data from one network participant to other selected network participants.

The above functions can also be accomplished using peer to peer WiFi, WiMax or other peer to peer communications. 40 However, for use with cellular communications and to assure the level of security that cell phone companies require, a centralized static IP routable Server is used.

The IP Server also fills another role of being a database from which data can be requested by network participants 45 (i.e. maps, satellite images, and the like) or can be pushed to network participants (i.e. symbology and soft switch changes, and the like). The Server is used to establish an ad hoc network within certain groups using an ad hoc event name and password.

This invention provides a method and a system establishing an ad hoc password protected digital and voice network that can be temporarily set up or longer lasting in nature. The invention described herein allows users to rapidly coordinate their activities without having to pre-enter data into a web or 55 identify others by name, E mail addresses or phone numbers. Essentially the users that establish the ad hoc and password protected digital and voice networks are required to enter the Server's IP address and an ad hoc event name and a password. In the case of military and first responders, the 60 name of the user's unit may also be used. This action causes the specific PDA or PC of the user to commence reporting directly to the Server's IP address. Once the Server receives the initial IP message from the user's PDA or PC, the server can commence to exchange data with the user's PDA or PC. 65 The initial IP message may also contain additional data such as a license number and, if desired, a phone number manu-

ally entered or automatically acquired by the ACS. The IP address of the PDA and PC unit sending the initial IP message is stored by the Server. The Server then responds with a message notifying the user that his PC/PDA is connected to the Server. The user PDA/PC then reports its GPS location and other status information directly to the Server. This information is retained by the Server even when there are no other devices initially communicating with the Server. When the other user's devices sign on to the Server with the same ad hoc event name and password, the Server software then recognizes all the users and stores their IP addresses in the Server. Thus the Server has all the users IP addresses stored and can pass location and status information among the ad hoc network participants even though the network participants have not entered other network participants' names, phone numbers or email addresses. Thus one of the purposes of the invention is to allow an ad hoc network to be formed on a temporary basis in a rapid

When using the PTT feature, the ACS can enable the network participant to: 1. PTT with all that are in the ad hoc digital network, or 2. PTT with select specific network participants, by touching their symbols) and then selecting PTT soft switch or 3. Specify a group of the network participants by assigning their symbols or unit names to a list of network participants and then associating the list with a soft switch whose function is to enable the operator to have PTT communications with all in the list.

Since only one person is transmitting on a PTT voice network at any given time, the receiving network participant's ACS can relate the PTT IP address to the IP address of the unit transmitting his identification on the digital ad hoc network. This information can then be used by the other PTT networked participant's ACS to: 1. flash the transmitting unit's name on their PDA/PC screens or 2. if a photograph has been attached to the ad hoc digital network symbol of the PTT transmitting person, to flash that photograph on the receiving unit's PDA/PC display.

It is an object of this invention to enable each participant in the communication network to join other ad hoc network participants to form an ad hoc digital and voice network with other cell phone users rapidly for coordinating member activities.

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a front plan view of a cellular phone/PDA/ GPS having a touch screen.

FIG. 2 shows the screen IP address entry menu.

FIG. 3 shows ad hoc net names and password screen entry name.

FIG. 4 shows a screen entry identifying user.

FIG. 5 shows a flow chart of the network as users sign on to the network.

FIG. 6 shows a flow chart that depicts how a group commander can command networked PDAs/PCS and radios to load a Push To Talk (PTT) channel.

FIG. 7 shows a flow chart that depicts how networked radio units respond to receipt of the Push-to-Talk (PTT) Commanded Channel.

FIG. 8 shows a PDA screen geographical display that represents the area covered by the network.

FIG. 9 shows a diagram that enables determining location, status, ViOP, PTT, and video communication between adios and cell phones.

5

FIG. 10 shows a diagram that describes enabling non RFID equipped PDA phones to receive RFID tag data.

PREFERRED EMBODIMENT OF THE INVENTION

A method and communication system that joins a communications network of participants using handheld cell phones having integrated PDA and GPS circuitry with ACS application programs that allow a participant having an ACS equipped cell phone to provide an ad hoc and password protected digital and voice network.

A communication Server acts as a forwarder for IP communications between any combination of cell phone/PDA users and/or PC based user. Network participant location, identity and status messages are sent to the Server by each user. Network participant entered tracks are also sent to the Server. Because this data is of interest to all the network participants, the Server forwards the data received from one participant to all other participants, thus providing the information necessary for all network participants to know the identity, location and status of all other network participants.

The Server allows the set up of the ad hoc network with an ad hoc event name and a password.

The Server also acts as a forwarder of data addressed from one participant to one or more addressed participants, thus permitting the transmission of free text, preformatted messages, photographs, video, email and URL data from one network participant to other selected network participants.

Referring now to the drawings and, in particular, to FIG. 1, a small handheld cellular phone 10 is shown that includes a PDA and a GPS communications device integrated in 35 housing 12 that includes an on/off power switch 19, a microphone 38, and a Liquid Crystal Display (LCD) display 16 that is also a touch screen system. The small area 16a is the navigation bar that depicts the telephone, GPS and other status data and the active software. Each cell phone includes 40 a Central Processing Unit (CPU) and databases that store information useful in the communication network. The CPU also includes a symbol generator for creating touch screen display symbols discussed herein. With the touch screen 16, the screen symbols are entered through GPS inputs or by the 45 operator using a stylus 14 (or operator finger) by manipulatively directing the stylus 14 to literally touch display 16. The soft switches 16d displayed on the display 16 are likewise activated by using a stylus 14 and physically and manipulatively directing the stylus to literally touch display 50 16. The display x, y coordinates of the touched point are known by a CPU in the PDA section of the communication system in housing 12 that can coordinate various information contained in the PDA relative to the x, y coordinate position on the display 16. Inside housing 12 is contained the 55 conventional cellular phone elements including a modem, a CPU for use with a PDA and associated circuitry connected to speaker 24 and microphone 38. A GPS navigational receiver that receives signals from satellites that can determine the latitude and longitude of the cellular phone housing 60 12 can be internal or external to the housing 12. Conventional PDA/cellular phones are currently on sale and sold as a unit (or with an external connected GPS) that can be used for cellular telephone calls and sending cellular Short Message Service (SMS) and Transmission Control Protocol 65 (TCP) TCP/IP or other messages using the FDA's display 16 and computer CPU. The GPS system including a receiver in

6

housing 12 is capable of determining the latitude and longitude and through SMS, TCP/IP, WiFi or other digital messaging software, to also transmit this latitude and longitude information of housing 12 to other cellular phones in the communication network via cellular communications, WiFi or radio. The device 10 includes a pair of cellular phone hardware activating buttons 20 to turn the cellular phone on and 22 to turn the cellular phone off. Navigation pad actuator 18 is similar to a joy or force stick in that the actuator 18 manually provides movement commands that can be used by the RDA's software to move a cursor on display 16. Switches 26 and 28 are designed to quickly select an operator specified network software program. Speaker 24 and microphone 38 are used for audio messages. Switch 19 at the top left of device 10 is the power on and power off switch for the entire device.

The heart of the invention lies in the applicant's ACS application programs provided in the device. The ACS programs are activated by clicking on an icon on the display to turn the ACS programs on or off. Mounted within housing 12 as part of the PDA is the display 16 and the CPU. The internal CPU includes databases and software application programs that provide for a geographical map and georeferenced entities that are shown as display portion 16b that includes as part of the display various areas of interest in the particular local map section.

When looking at display 16, the software switches (soft switches) which appear at the very bottom of the display 16d are used to control by touch many of the software driven functions of the cellular phone and PDA. The soft switches are activated through the operator's use of the navigation pad 18, or a small track ball, force stick or similar hardware display cursor pointing device. Alternatively, the operator may choose to activate the software switches by touching the screen with a stylus 14 (or finger) at the switches' 16d locations. When some of the software switches are activated, different software switches appear. The bar display 16d shows the software switches "ZM IN (zoom in)," "ZM OT (zoom out)," "CENT (center)" and "GRAB (pan/grab)" at the bottom of the screen. These software switches enable the operator to perform these functions. The "SWITH (switch)" software switch at the lower right causes a matrix of layered software switches (soft switches) to appear above the bottom row of switches. Through use of the software switches, the operator can also manipulate the geographical map 16b or chart display. When looking at FIG. 1, display symbols depicting permanent geographical locations and buildings are shown. For example, the police station is shown and, when the symbol is touched by the stylus or finger, the latitude and longitude of the symbol's location, as shown in display section 16c, is displayed at the bottom left of the screen. The bottom right side of display 16c is a multifunction inset area that can contain a variety of information including: a) a list of the communication link participants; b) a list of received messages; c) a map, aerial photograph or satellite image with an indication of the zoom and offset location of the main map display, which is indicated by a square that depicts the area actually displayed in the main geographical screen 16b; d) applicable status information; and e) a list of the communication net participants. Each participant user would have a device 10 shown in FIG. 1.

Also shown on the display screen 16, specifically the geographical display 16b, is a pair of different looking symbols 30 and 34, a small triangle and a small square, which are not labeled. These symbols 30 and 34 can represent communication net participants having cellular phones in the displayed geographical area that are part of the

overall cellular phone communications net, each participant having the same device **10** used. The latitude and longitude of symbol **30** is associated within a database with a specific cell phone number and, if available, its IP address and email address. The screen display **16**b, which is a touch screen, 5

provides x and y coordinates of the screen **16**b to the CPU's software from a map in a geographical database. The software has an algorithm that relates the x and y coordinates to latitude and longitude and can access a communications net participant's symbol or a fixed or movable entity's symbol 10

as being the one closest to that point.

In order to initiate a telephone call to the cellular phone user (communication net participant) represented by symbol (triangle) 30 at a specific latitude and longitude display on chart 16b, the operator touches the triangle 30 symbol with 15 the stylus 14. The user then touches a "call" software switch from a matrix of displayed soft switches that would overlay the display area 16c. Immediately, the cellular phone will initiate a cellular telephone call to the cellular phone user at the geographical location shown that represents symbol 30. 20 A second cellular phone user (communication net participant) is represented by symbol 34 which is a small square (but could be any shape or icon) to represent an individual cellular phone device in the display area. The ring 32 around symbol 30 indicates that the symbol 30 has been touched and 25 that a telephone call can be initiated by touching the soft switch that says "call." When this is done, the telephone call is initiated. Other types of symbolic elements on the display 16 can indicate that a cellular phone call is in effect. Additionally, the operator can touch both symbol 34 and 30 symbol 30 and can activate a conference call between the two cellular phones and users represented by symbols 30 and 34. Again, a symbolic ring around symbol 34 indicates that a call has been initiated.

Equally important, a user can call the police station, or 35 any other specific geographical facility displayed on the map including: buildings, locations of people, vehicles, facilities, restaurants, or the like, whose cellular phone numbers and, if available, Email addresses, IP addresses and their URLs (previously stored in the database) by touching a specific 40 facility location on the map display using the stylus 14 and then touching the cellular phone call switch. As an example, the operator can touch and point to call a restaurant using a soft switch by touching the restaurant location with a stylus and then touching the call soft switch. The cellular phone 45 will then call the restaurant. Thus, using the present invention, each participant can touch and point to call to one or more other net participants symbolically displayed on the map, each of whom has a device as shown in FIG. 1, and can also point to call facilities that had been previously stored in 50 the phone's database. Furthermore, this symbol hooking and soft switch technique can be used to go to a fixed facility's website or to automatically enter the fixed facility's email address in an email.

Each cellular phone/PDA/GPS user device is identified on 55 the map display of the other network participant user's phone devices by a display symbol that is generated on each user phone display to indicate each user's own location and identity. Each symbol is placed at the correct geographical location on the user display and is correlated with the map 60 on the display and is transmitted and automatically displayed on the other network participant's PC and PDA devices. The operator of each cellular phone/PDA/GPS device may also enter one or more other fixed entities (buildings, facilities, restaurants, police stations, etc.) and 65 geo-referenced events such as fires, accidents, etc., into its database. This information can be likewise transmitted to all

8

the other participants on the communications net and automatically displayed. The map, fixed entities, events and cellular phone/PDA/GPS device communication net participants' latitude and longitude information is related to the "x" and "y" location on the touch screen display map by a mathematical correlation algorithm.

When the cellular phone/PDA/GPS device user uses a stylus or finger to touch one or more of the symbols or a location displayed on the cellular phone map display, the system's software causes the status and latitude and longitude information concerning that symbol or location to be displayed. In order to hook a symbol or "track" such as another net participant which represents an entity on the geo-referenced map display, or a fixed geographical entity such as a restaurant, police station or a new entity observed by a cell phone user which is discussed below, the operator touches at or near the location of a geo-referenced symbol appearing on the cellular phone/PDA display that represents a specific track or specific participant or other entity. The hook application software determines that the stylus (or finger) is pointed close to or at the location of the symbol and puts a circle, square or other indication around the symbol indicating that amplification information concerning the symbol is to be displayed. The operator can hook entered tracks or his own track symbol and add data or change data associated with the indicated symbol. The hook application code then sends a message to the database application code to store the facility or entity's updated data. The display application code retrieves the primary data and amplification data concerning the symbol or entity from the database and displays the information at the correct screen location. The operator can then read the amplification data that relates to that specific symbol at the specific location. The cell phone operator can also select soft switches on the touch screen display to change the primary data and amplification data. Furthermore, the operator can use a similar method of hooking and selecting to activate particular soft switches to take other actions which could include: making cellular phone calls, conference calls, 800 number calls; sending a free text message, operator selected preformatted messages, photographs or videos to the hooked symbol; or to drop an entered symbol.

Each known net participant has a cellular phone number, IP address and, if available, Email address that is stored in each participant's device database.

To use the communication system, a user starts the PDA/cellular phone device system by turning on the cell phone power and selecting the cell phone and network software which causes: a) the cellular phone to be activated (if it has not already been activated); b) the GPS interface receiver to be established; c) a map of the geographic area where the operator is located and operator's own unit symbol to appear at the correct latitude and longitude on the map on the display; d) the locations of fixed facilities such as restaurants, hotels, fire departments, police stations, and military barracks, that are part of the database to appear as symbols on the map; e) the device selected item read out area which provides amplification information for the communications net participants or the entity that has been hooked (on the display screen) to appear on the display; f) an insert area that contains various data including: the list of net participants, a list of messages to be read, an indication of what portion of the map is being displayed in major map area and other information to appear on the display; and g) a row of primary software created "soft switches" that are always present on the display to appear.

For point to call network units and fixed facilities, the application code detects the x, y display screen location of the symbol that is designated by the user's stylus and translates the x, y coordinates to latitude and longitude and then: (1) searches the database to find the symbol at that 5 location, (2) places a "hook" indicator (a circle, square or other shape) around the symbol, (3) displays any amplifying data and (4) obtains the symbol's associated phone number (or, for Voice over IP (VoIP) an IP address) from the database. Upon receiving a "call" designation from the soft switch, the operator's device's ACS causes the appropriate phone number or IP address to be called. Upon receiving an indication that the phone number is being called, the application code places a box around the symbol (color, dashed or the like). When the call is connected, the box changes to 15

indicate that the connection is made. When the other party

hangs up, the box disappears.

9

As each of the cell phone participants reports its identity, location and status to the other participants' devices, the received data is automatically geo-referenced and filed in 20 their databases that are accessible by identity and by location. This data is then displayed on each cell phone display. When a request for data is received by touching the display screen, a location search is made by the ACS and a symbol modifier (circle, square, etc.) is generated around the symbol 25 closest to the x, y position of the stylus. When the application code receives a soft switch command to place a phone call or send data, the software uses the phone number (or IP address) associated with the unit to place the call or to send

If a cell phone device receives a digital message that a call is being received, the receiving cell phone's ACS application code places a box or similar object around the transmitter symbol indicating who the call is from. When the call is answered, the application software changes the visual 35 characteristics of the box. In a similar manner, when a phone receives a digital text message, photograph or video, a box appears around the transmitter's symbol indicating the transmitter of the message. The point to call network devices are with the same software for use as a total participant network. Other situations for calling facilities that are not network participants are also described below.

Thus, a user is capable of initiating a cellular phone call by touch only and initiating conference calls by touching the 45 geo-referenced map symbols. Furthermore, by using a similar symbol touching technique, a cellular phone can send user selected messages to cause a remote cellular phone to display and optionally announce emergency and other messages and to optionally elicit a response from the remote 50 cellular phone.

All of the network participants have the same communication cell phone/PDA/GPS device described herein. The method and system include the ability of a specific user to provide polling in which other cellular phones, using SMS, 55 internet or WiFi, report periodically based on criteria such as time, speed, distance traveled, or a combination of time, speed and distance traveled. A user can manually poll any or all other cell phone devices that are used by all of the participants in the communication network having the same 60 devices. The receiving cellular phone application code responds to the polling command with the receiving cellular phone's location and status which could include battery level, GPS status, signal strength and entered track data. Optionally, the phone operators can set their phones to report 65 automatically, based on time or distance traveled intervals or another criterion.

10

The soft switch application software causes a visual display of a matrix such as five across by six up (or another matrix) in which switch names are placed on the cellular/ PDA display. The soft switch network application software knows the touch screen location of each of the switches in the matrix and the software routines that will be activated upon touching the switch.

The bottom row of soft switches displayed on the touch screen remains visually fixed. These switches concern the functions that are the most often used. One of the switches causes a matrix of other soft switches to appear above the visually fixed soft switches. These switches are function soft switches, the activation of any one of which causes a different matrix of soft switches to appear, which are known as the action soft switches. When the action soft switches appear, the function soft switch, which caused the action soft switches to appear, itself appears as a label in the lower left (or some other standard location) indicating to the operator the function soft switch that has been selected. When the operator selects an action soft switch, the appropriate application software to accomplish the action is activated.

Upon receiving a soft switch activation message, the ACS accesses the appropriate task execution software which accomplishes the required tasks including: entry of track data, entry of track amplification data, transmission of alpha/numeric messages, photographs, videos, display of messages to be read, selection of map types, placing voice calls, placing conference calls and 800 conference calls, presenting different potential operator selections, control of the display actions, polling network participants, establishing nets of participants (groups) so that communications with all in the group can be accomplished with a single soft switch action, and dropping a previously entered track. By providing a matrix and layers of soft switches which are easily manipulated by a stylus, each cell phone device in the communication network is extremely efficient in accessing and coordinating the appropriate application program for the device to perform.

Users such as emergency groups, police, fire personal, network participants and each one has a PC/PDA device 40 military, first responders and other groups need to be able to set up ad hoc digital and voice networks easily and rapidly. The users need to be able to rapidly coordinate activities eliminating the need for pre-entry data as discussed above. Users are required to enter the Servers' IP address and an ad hoc event name, a password and, for first responders and military, the names of their units. This will normally be controlled by the PDA/PC user's position in the chain of command. For others it can be any selected name and, if desired, password.

> Referring now to FIG. 2, the PDA/PC screen displays an IP address entry menu. The user inserts the Server's IP address. Thus, as shown in FIG. 2, the user has entered in the cell phone/PDA the Server IP address and port number along with the GPS port listing and other information. Once that information is entered, referring now to FIG. 3, the user now enters the ad hoc event network name which is shown in this example as "Katrina" along with a password. Referring now to FIG. 4, the user then enters the user name or a unit name. FIG. 4 shows the entered user name and a phone number. The phone number may be automatically entered by the ACS or manually entered. The phone number is not required unless using the phone system (not VoIP) to make calls. These are the initial user steps required to establish an ad hoc network or to join onto an existing ad hoc network.

Referring now to FIG. 5, these actions cause the user cell phone/PDA or PC to commence reporting to the Server. Upon receipt of the initial message from the user's PDA/PC,

11

which may also contain additional data such as a license number, the Server stores the IP address of the user's PDA/PC unit and responds with a message notifying the user that he or she is connected to the Server. The PDA/PC then automatically commences to report its GPS derived 5 location and other status information to the Server. Since there are no other devices initially communicating with the Server, the Server just retains the information. When other devices sign on to the Server with the same ad hoc event name and password, the Server's software recognizes this and stores their IP addresses. Since the Server has all parties' IP addresses, the server is able to pass location and status information automatically between the ad hoc network participants. This can occur even though the ad hoc network participants have not entered other network participants names, telephone numbers or Email addresses and do not have the other network participants' IP addresses, phone numbers or Email addresses. Once this connection is made, data types that are entered on one display that is of interest 20 to all is sent from the server to all others in the network. Such data types include track location and track amplification data, geo-referenced white boards, and chat.

When the PDA/PC user wants to address particular data (a text message, photograph, video clip, voice recording, 25 white board, or chat), the user enters the name of the other ad hoc network participant by either entering a name or touching his or her symbol. Since the Server knows the IP address of the name or symbol, the Server forwards the data appropriately to that network participant. When a unit signs 30 off the network, it transmits a message to the Server which then transmits a message to all the network participants to drop the unit and its associated tracks. If a unit loses communications for a variable time period, the unit's data is flushed from each of the recipient network participants 35 systems according to a variable time period. After a separate variable time period, the Server also flushes the non-reporting units data.

As can be seen in FIG. 6, provisions have been made for the PDA/PC to report on multiple networks thus allowing 40 both digital communications up and down the chain of command and with adjacent units that have entered a common ad hoc network name and password.

Typically military and First Responder units use Push-to-Talk (PTT) communications. Units in an organization's 45 chain of command typically have instituted a method to establish voice communications between themselves for they know each other's cellular phone numbers, PTT cellular group identifiers and radio frequencies or channel numbers. However, in a disaster there are many different 50 units (fire, police, EMS, Military, and the like) involved all of whom need to establish voice communications between each other. The issue then becomes how to coordinate these PTT voice communications with the ad hoc digital communications so that all on the digital data network automatically 55 also have PTT voice communications with each other. If the PCs and PDAs in a group have manually entered their phone numbers, or the ACS has automatically entered their phone numbers, and sent their phone numbers as part of their initial message to the Server, this data is then sent by the Server to 60 all others in the network. Upon receiving the phone number data, the recipients' ACS loads the cell phones numbers into their databases creating a phone number PTT group common with the digital IP network group.

The issue when using radios, however, is different. PTT 65 radio coordination between multiple people is achieved by using a common radio frequency "Channel".

12

Furthermore, it is desirable to enable it so that, when new network participants join the digital network, they are automatically included in the voice network and, when they leave the digital network, they are automatically dropped from the digital network.

As can be seen in FIG. 6 and FIG. 7, a network participant currently can establish a new ad hoc digital network or join an existing ad hoc digital network by entering the ad hoc network name and password into his PDA/PC. To enable voice coordination with all that are a part of the ad hoc digital network, the user then enters (if user is authorized to do so) a Channel or Group number that the user is commanding all in the ad hoc network to establish as their PTT voice net. As seen in FIG. 6, the operator has commanded all to shift to Radio Channel or to a specific PTT cellular or radio channel; i.e. Group 7.

This action causes the PTT Channel, or PTT Group 7, to be sent to the other PDA/PC users in the ad hoc password protected network through the Server.

As shown in FIG. 6 and FIG. 7, the Group leader enters the Katrina Fire ad hoc network and issues a command which is sent to the Server to cause the PDAs/PCs that are in the Katrina Fire Group to automatically shift their Radio or cellular device to Channel 7. Each PDA cell phone can connect to the user's Radio for control with a USB cable, or WiFi, Bluetooth, or Near Field Communications (NFC) signals or other communications that are contained in the PDA/PC cellular device. This enables the Radios to shift to a common channel. This action is received by the Server which then sends the "Shift to Channel 7 Command" to all network participants in the Katrina Fire ad hoc network. When the PDA/PC/Tablet Katrina Fire network participant's software receives the command to shift its Radio Channel PPT to Group 7, this action causes the PDA's ACS to establish a new Channel 7 group (or to override an old Channel 7 group) that consists of all on the digital ad hoc network. The PC and PDAs then send their radios' digital interfaces messages to shift to Channel 7 or to the frequency associated with Channel 7. The digitally networked PC's and PDA's ACS devices then send a message to all on the digital network that they have shifted to Channel 7 (or to the appropriate frequency) and also further send the Group Leader's identifier and Command to shift to Channel 7 so that the ACS' devices associated with new users joining the digital network will automatically digitally set their radios to Channel 7 or the appropriate frequency.

As shown in FIG. 7, each time one of the network participants reports to the Katrina Fire network its Name, Position and Status, it now also reports that it is in PTT Channel 7 enabling the PTT group to grows in size until it encompasses all in the ad hoc password protected digital network. When units drop out of the Common Interest Network or lose communications because they are no longer active or they are out of range, their PTT Channel data is likewise dropped as they dropped out of the digital because their reports have not been received for a set, but adjustable, time period. If a unit rejoins the network, their PTT Name and Phone number is again automatically added to the Katrina Fire Interest Group as they are accepted by the Server into the Katrina Fire Interest digital Group.

When using the PTT feature, the ACS can enable the network participant to: 1. PTT with all that are in the ad hoc digital network, or 2. PTT with select specific network participants, by touching their symbol(s) and then selecting PTT soft switch or 3. Specify a group of the network participants by assigning their symbol or unit name to a list of network participants and then associating the list with a

13 soft switch whose function is to enable the operator to have PTT communications with all in the list.

Since only one person is transmitting on a PTT voice network at any given time, the receiving network participant's ACS can relate the PTT IP address to the IP address 5 of the unit transmitting his identification on the digital ad hoc network. This information can then be used by the other PTT networked participant's ACS to: 1. flash the transmitting unit's name on their FDA/PC screens or 2. if a photograph has been attached to the ad hoc digital network symbol of the PTT transmitting person, to flash that photograph on the receiving unit's PDA/PC display.

Referring now to FIG. 8, for some Emergency events, and in particular military operations, it is desirable to further define ad hoc networks so that the networks encompass only 15 a certain geographical area defined by boundary lines on a map. To accomplish this, an enhancement to the ad hoc digital and voice PTT password protected network is provided. As an example, once the Katrina. Fire digital and PTT network is established, the ad hoc network can be further 20 refined by the Group Leader defining a map area that limits the participating group to only those users within a geographically defined area by the Group Leader, creating on his PC/PDA display a box that defines a geographic area on

As shown in FIG. 8, the Latitude/Longitude points that define the rectangle of the boundary area are sent from the Group Leader's device to the Server which relays the data to the other participating unit PC/FDA devices in the Katrina Fire network. When the participating unit devices receive 30 the Latitude/Longitude points, their software computes whether their PC/PDA unit is inside or outside a boundary area. If the users are inside the defined area, the users retain but disregard the Latitude/Longitude data and continue to report on the digital password protected network and to use 35 the commanded PTT channel/frequency. However, if the users are outside the area, the users send a "drop me message" to the Katrina Fire PDA/PC digital network Server and cease reporting on the network. When Katrina Fire network PDA/PC user units leave the defined area or lose 40 communications for a specified, but adjustable, time period, the Server drops the unit from the network and informs all network users that the unit is dropped from the digital network and from voice PTT Channel 7 which causes all others on the network to drop them. When Katrina Fire 45 networked PDA/PC user units re-enter the area, the unit's ACS detects the fact and commences reporting as it receives reports from other network participants it will receive the current PTT channel or frequency.

In disasters, battery life is essential as there may not be 50 extra batteries available or a power available to recharge the battery. It is therefore essential to lessen battery utilization. The normal method by which this is accomplished is to not use software that keeps the display on, uses the GPS or transmits on the communications. However, deactivating 55 any one of these processes produces a problem with providing location data to all on the network.

With location sharing there are essentially two times when the location information is essential: a) Where the user wants all to know his/her location and status and the location and 60 status of others and b) When the commander wants to know the location and status of all or of a particular unit.

When the user wants others to know the user location and status, the user can simply turn on location reporting softcommunications reporting software causing the reporting of the user location to the ad hoc password protected digital 14

network. However, when the commander or someone else wants to know the location and status of the PDA/PC unit that is conserving battery usage by having user display, GPS and communications transmission turned on, the commander has no method to accomplish this.

This problem is overcome by enabling the commander to transmit a "turn on" IP message to the battery conserving(s) unit(s) by addressing the message to the ad hoc network Server which then sends an SMS message to the addressed phone. The SMS message will be received as long as the phone is powered on, as SMS is integrated with the cell phone's voice communications. The Server could also send a turn on IP message to networked radios, which will then cause the radio's computer to send a digital message to the receiving PC/PDA to activate the user display and location and status reporting software.

Referring now to FIG. 9, the diagram illustrates the enabling of location, status, VoIP, PTT, and video communications between radios and cell phones. The server maintains a temporary retention of names and IP addresses and sends data between all with the same ad hoc name unless addressed to a specific IP address. This requires that there is a radio with digital capabilities attached to the server shown in FIGS. 5, 6, and 7. These radios are set so that they each have a unique IP address. All of the participants have either PDA cell phones or PDAs without cellular. Those that also have PDAs without cellular (or choose not to use cellular) are connected to their radios via a USB cable or Wi-Fi, Bluetooth, or near field communications (NFC) that is part of the PDA/PC OR PDA cell phone. This is illustrated in FIG. **9**.

Referring now to FIG. 10 the diagram shows enabling non-RFID equipped PDA phones to receive RFID tag data. The server maintains a temporary retention of how Tags relate to names and sends data to local display and to other ACS network participants. Currently RFID tags are used for many functions, one of which is to track personnel inside a building to the room or compartment in which they are located. This is accomplished by RFID readers that are in each of the rooms. When personnel with an RFID tag get within a particular distance or range of the RFID reader, the reader detects their presence and sends it to a central site server via a USB cable or Wi-Fi. The PC connected to the server displays the personnel room locations. With the invention described herein, the server would then send the location to the ACS PDA/PC phones that would be carried by individuals located throughout the building or ship. The PDA/PC phones would display the room or ships compartments and the location of individuals with RFID tags and simultaneously enable PTT, chat, messaging, whiteboards, commands geo-fence penetration alerts or other types of messages between each of the PDA cell phones. The RFID tag would provide room location data of all to all that are on the ACS Wi-Fi network without their PDA cell phone having an RFID Reader attached to it. The operation is explained in detail in FIG. 10.

The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made there from within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

1. A method performed by a mobile device having a ware which then turns on the display, the GPS and the 65 display and one or more processors, the method comprising: executing operations on the one or more processors of the mobile device, the operations comprising:

15

- associating the mobile device with an identifier, wherein the identifier corresponds to a network participant.
- determining a device location corresponding to a geographical location of the mobile device;
- receiving, from a server, mapping data including a map and coordinate translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations;
- receiving, from a server, location data indicating 10 vehicle locations of one or more vehicles;
- marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to the respective vehicle locations of the one or more vehicles, wherein marking the map comprises:
 - determining, based at least in part on the vehicle locations and the coordinate translation data, positions on the map corresponding to the vehicle locations,
 - displaying the map on the display of the mobile device, and
 - placing the vehicle symbols on the map at the 25 determined positions corresponding to the vehicle locations;
- responsive to user selection of a portion of the display corresponding to a position on the map, identifying a selected facility symbol based on the selected 30 position, comprising: initiating a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position and, based on a result of the search, identifying the selected facility symbol as the symbol located nearest to the selected 35 position:
- responsive to user input, transmitting first information to a first vehicle of the one or more vehicles; and
- receiving second information corresponding to the first vehicle and displaying the received second information on the display of the mobile device,
- wherein the mobile device does not have access to a phone number associated with a computing device corresponding to the first vehicle, an Internet Protocol (IP) address associated with the computing 45 device corresponding to the first vehicle, and an e-mail address associated with the computing device corresponding to the first vehicle.
- 2. The method of claim 1, wherein:
- determining the device location comprises obtaining geographical coordinates representing the geographical location of the mobile device from a global positioning system (GPS) receiver located within the mobile device; and
- marking the map further comprises placing the participant 55 symbol at a position on the map corresponding to the geographical coordinates representing the geographical location of the mobile device.
- 3. The method of claim 1, wherein transmitting the first information to the first vehicle comprises sending data 60 comprising at least one of the identifier and the device location to a server.
- **4.** The method of claim **1**, further comprising updating the map by updating at least one item selected from the group consisting of: a position of the participant symbol, positions 65 of the one or more vehicle symbols, and a portion of the map displayed on the display of the mobile device.

16

- 5. The method of claim 1, further comprising:
- receiving, from a server, updated respective vehicle locations of the one or more vehicles; and
- updating, based on the received updated vehicle locations and the coordinate translation data, positions of the one or more vehicle symbols on the map.
- 6. The method of claim 1, further comprising:
- receiving, from a GPS receiver, updated device locations; and
- updating, based on the received device locations and the coordinate translation data, a position of the participant symbol on the map.
- 7. The method of claim 1, wherein the received second information is sent by the computing device corresponding to the first vehicle based on at least one criterion selected from the group consisting of: (1) passage of time, and (2) movement of the first vehicle.
- **8**. The method of claim **1**, wherein the received second information comprises one or more messages.
- **9.** The method of claim **8**, wherein the one or more messages comprise data to facilitate the mobile device transmitting the first information to the first vehicle without the mobile device using the phone number, IP address, and e-mail address associated with the first vehicle.
 - 10. The method of claim 1, further comprising: communicating the identifier to a server; and joining a communication network after the communication of the identifier to the server.
- 11. The method of claim 10, wherein the communication network comprises one or more communication devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier.
- 12. The method of claim 1, further comprising determining a location-reporting status of the mobile device, wherein the location-reporting status is one of a reporting state and a non-reporting state, and wherein transmitting the first information to the first vehicle comprises sending the device location to a server only when the location-reporting status is in the reporting state.
- 13. The method of claim 1, wherein transmitting the first information to the first vehicle comprises transmitting data including the first information to a server using an Internet Protocol, wherein the second information corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol, and wherein an IP address of the server is accessible to the mobile device.
- 14. The method of claim 13, wherein the data transmitted to the server further includes a second identifier corresponding to a second network participant associated with the computing device corresponding to the first vehicle.
 - 15. The method of claim 14, wherein:
 - the server stores an IP address of the computing device associated with the second network participant identified by the second identifier; and
 - the server transmits the first information to the computing device corresponding to the first vehicle in a message addressed to the stored IP address of the computing device corresponding to the first vehicle.
- 16. The method of claim 1, further comprising determining coordinates of the selected position on the map,
 - wherein data associated with the set of symbols include coordinates of positions on the map of the symbols in the set,

17

- wherein the search of the set of symbols includes a search of the coordinates of the positions of the symbols in the set for coordinates located nearest to the coordinates of the selected position, and
- wherein the selected facility symbol is identified as the 5 symbol located nearest to the selected position based on a result of the search of the coordinates of the positions on the map of the symbols.
- 17. The method of claim 1, further comprising determining coordinates of the selected portion of the display,
 - wherein data associated with the set of symbols include coordinates of portions of the display corresponding to the symbols in the set,
 - wherein the search of the set of symbols includes a search of the coordinates of the portions of the display corresponding to the symbols in the set for coordinates located nearest to the coordinates of the selected portion of the display, and
 - wherein the selected facility symbol is identified as the 20 symbol located nearest to the selected position based on a result of the search of the coordinates of the portions of the display corresponding to the symbols.
- **18**. The method of claim **1**, further comprising determining coordinates of a location represented by the selected ²⁵ position on the map,
 - wherein data associated with the set of symbols include coordinates of locations of entities represented by the symbols in the set,
 - wherein the search of the set of symbols includes a search of the coordinates of the locations of the entities represented by the symbols in the set for coordinates located nearest to the coordinates of the location represented by the selected position on the map, and
 - wherein the selected facility symbol is identified as the symbol located nearest to the selected position based on a result of the search of the coordinates of the locations of the entities represented by the symbols.
 - 19. The method of claim 1, further comprising:
 - after identifying the selected facility symbol, displaying an address of the facility represented by the facility symbol.
- **20**. The method of claim **1**, wherein the mobile device is a first mobile device, wherein the map is a first map, and 45 wherein the method further comprises:
 - receiving second user input via user interaction with a second portion of the display of the first mobile device, the second user input specifying a position on the first map of an event symbol representing an event; and based on the second user input:
 - determining coordinates of a location of the event based on coordinates of the specified position on the first map and the coordinate translation data;
 - associating the location of the event with the event 55 symbol:
 - displaying the event symbol at the specified position on the first map; and
 - transmitting the location of the event to a second mobile device corresponding to the first vehicle, 60 wherein the second mobile device is operable to display a second map and to place the event symbol on the second map.
- 21. The method of claim 20, wherein the coordinates of the location of the event are determined based on coordinates of the position of the event symbol on the map and the coordinate translation data.

18

- 22. The method of claim 20, wherein the coordinates of the location of the event are determined based on coordinates of the second portion of the display and the coordinate translation data.
- 23. The method of claim 1, wherein the map is first map, wherein the coordinate translation data are first coordinate translation data, wherein an area depicted in the first map represents a first portion of an area depicted in a second map, and wherein the method further comprises:
 - receiving, from a server, a third map representing a second portion of the area depicted in the second map and second coordinate translation data correlating coordinates of positions on the second map with corresponding coordinates of geographical locations.
- **24**. A system comprising a mobile device contained in a portable housing, the mobile device comprising:
 - a touch screen display, non-transitory computer-readable media, and a central processing unit (CPU);
 - a mobile device transmitter communicatively coupled to the CPU;
 - a mobile device receiver communicatively coupled to the CPU;
 - a global positioning system (GPS) receiver, communicatively coupled to the CPU, configured to obtain geographical coordinates corresponding to a geographical location of the mobile device;
 - the CPU configured to execute instructions to perform operations comprising:
 - associating the mobile device with an identifier, wherein the identifier corresponds to a network participant;
 - determining, by the CPU, a device location corresponding to the geographical location of the mobile device based on the geographical coordinates obtained by the GPS receiver located within the mobile device;
 - receiving, from a server, mapping data including a map and coordinate translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations;
 - receiving, from a server, location data indicating vehicle locations of one or more vehicles;
 - marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to respective vehicle locations of the one or more vehicles, wherein marking the map comprises:
 - determining, based at least in part on the vehicle locations and the coordinate translation data, positions on the map corresponding to the vehicle locations,
 - displaying the map on the display of the mobile device, and
 - placing the vehicle symbols on the map at the determined positions corresponding to the vehicle locations:
 - responsive to user selection of a portion of the display corresponding to a position on the map, identifying a selected facility symbol based on the selected position, comprising: initiating a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position and, based on a result of the search, identifying the selected facility symbol as the symbol located nearest to the selected position;

25

19

- after receiving user input on the touch screen display, transmitting, by the mobile device transmitter, first information to a first vehicle of the one or more vehicles; and
- after transmitting the first information to the first vehicle, 5 receiving, at the mobile device receiver, second information corresponding to the first vehicle and displaying the received second information on the touch screen display of the mobile device,
- wherein the mobile device does not have access to a 10 phone number associated with a computing device corresponding to the first vehicle, an Internet Protocol (IP) address associated with the computing device corresponding to the first vehicle, and an e-mail address associated with the computing device corresponding to 15 the first vehicle.
- 25. The system of claim 24, wherein the operations further comprise:
 - receiving, from a server, at the mobile device receiver, updated respective vehicle locations of the one or more 20 vehicles; and
 - updating, based on the received updated vehicle locations and the coordinate translation data, positions of the one or more vehicle symbols on the map displayed on the touch screen display.
- 26. The system of claim 24, wherein the operations further comprise:
 - communicating, by the mobile device transmitter, the identifier to a server; and
 - joining a communication network after the communica- 30 tion of the first identifier to the server.
- 27. The system of claim 26, wherein the identifier is a first identifier, and wherein the communication network comprises one or more communication devices corresponding, respectively, to one or more second vehicles, and wherein 35 each of the one or more communication devices is associated with a respective second identifier.
- 28. The system of claim 27, wherein the operations further comprise:

20

- receiving, by the mobile device receiver, the second identifiers corresponding to one or more communication devices; and
- displaying, on the map displayed on the touch screen display, one or more second vehicle symbols corresponding to the second identifiers corresponding to the second vehicles.
- 29. The system of claim 24, wherein:
- the operations further comprise determining, by the CPU, a location-reporting status of the mobile device, wherein the location-reporting status is one of a reporting state and a non-reporting state; and
- transmitting, by the mobile device transmitter, the first information to the first vehicle further comprises sending the device location to a server only when the location-reporting status is in the reporting state.
- 30. The system of claim 24, wherein:
- transmitting the first information to the first vehicle comprises transmitting data to a server using an Internet Protocol:
- the data transmitted to the server includes the first information and a second identifier corresponding to a second network participant associated with the computing device corresponding to the first vehicle;
- the second information corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol; and
- an IP address of the server is accessible to the mobile device
- 31. The system of claim 30, wherein:
- the server stores an IP address of the computing device associated with the second network participant identified by the second identifier; and
- the server transmits the first information to the computing device corresponding to the first vehicle in a message addressed to the stored IP address of the computing device corresponding to the first vehicle.

* * * * *

Exhibit E

(12) United States Patent

Beyer, Jr. et al.

(54) METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

(71) Applicant: AGIS Software Development LLC,

Marshall, TX (US)

(72) Inventors: Malcolm K. Beyer, Jr., Jupiter, FL

(US); Christopher R. Rice, Redmond,

WA (US)

(73) Assignee: AGIS Software Development LLC,

Marshall, TX (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 15/809,102

(22) Filed: Nov. 10, 2017

(65) Prior Publication Data

US 2018/0152556 A1 May 31, 2018

Related U.S. Application Data

(63) Continuation of application No. 15/722,660, filed on Oct. 2, 2017, now Pat. No. 10,299,100, which is a (Continued)

(51) Int. Cl.

H04W 4/00 (2018.01) **H04W 4/90** (2018.01)

(Continued)

(52) U.S. Cl.

CPC *H04W 4/90* (2018.02); *G01S 19/17* (2013.01); *G06F 3/0482* (2013.01);

(Continued)

(10) Patent No.: US 10,341,838 B2

(45) **Date of Patent:**

*Jul. 2, 2019

(58) Field of Classification Search

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,325,310 A 6/1994 Johnson et al. 5,555,286 A 9/1996 Tendler

(Continued)

FOREIGN PATENT DOCUMENTS

EP 1148754 A2 10/2001 EP 1655888 A1 5/2006

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 15/722,660, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, filed Oct. 2, 2017.

(Continued)

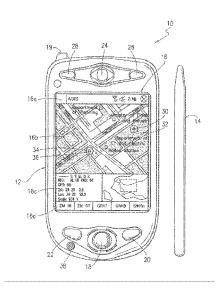
Primary Examiner — Omoniyi Obayanju

(74) Attorney, Agent, or Firm — Goodwin Procter LLP

(57) ABSTRACT

A method and system includes the ability for individuals to set up an ad hoc digital and voice network easily and rapidly to allow users to coordinate their activities by eliminating the need for pre-entry of data into a web or identifying others by name, phone numbers or email. This method is especially useful for police, fire fighters, military, first responders or other emergency situations for coordinating different organizations at the scene of a disaster to elevate conventional communication problems either up and down the chain of command or cross communication between different emergency units. The method and system provides that the users are only required to enter a specific Server IP address and an ad hoc event name, a password and perhaps the name of the particular unit.

26 Claims, 7 Drawing Sheets



Page 2

Related U.S. Application Data

continuation of application No. 15/469,469, filed on Mar. 24, 2017, now Pat. No. 10,292,033, which is a continuation of application No. 15/287,638, filed on Oct. 6, 2016, now Pat. No. 9,706,381, which is a continuation of application No. 14/529,978, filed on Oct. 31, 2014, now Pat. No. 9,467,838, which is a continuation-in-part of application No. 14/027,410, filed on Sep. 16, 2013, now Pat. No. 8,880,042, which is a continuation of application No. 13/751,453, filed on Jan. 28, 2013, now Pat. No. 8,538,393, which is a continuation-in-part of application No. 12/761,533, filed on Apr. 16, 2010, now Pat. No. 8,364,129, which is a continuation-in-part of application No. 11/615, 472, filed on Dec. 22, 2006, now Pat. No. 8,126,441, which is a continuation-in-part of application No. 11/308,648, filed on Apr. 17, 2006, now Pat. No. 7.630,724, which is a continuation-in-part of application No. 10/711,490, filed on Sep. 21, 2004, now Pat. No. 7,031,728.

(51) **Int. Cl.** H04M 1/725 (2006.01)H04W 68/00 (2009.01)H04W 4/02 (2018.01)H04W 76/50 (2018.01)H04W 76/11 (2018.01)H04M 1/2745 (2006.01)H04W 4/08 (2009.01)H04W 64/00 (2009.01)H04W 84/18 (2009.01)H04W 12/08 (2009.01)H04W 12/02 (2009.01)G06F 3/0482 (2013.01)G06F 3/0484 (2013.01)H04L 29/06 (2006.01)(2006.01)H04L 29/08 H04W 4/021 (2018.01)H04L 29/12 (2006.01)H04M 7/00 (2006.01)H04W 12/06 (2009.01)H04W 68/04 (2009.01)G01S 19/17 (2010.01)H04M 3/56 (2006.01)H04W 4/14 (2009.01)H04W 76/15 (2018.01)H04W 4/10 (2009.01)H04W 76/45 (2018.01)H04W 12/04 (2009.01)H04W 84/04 (2009.01)

(52) U.S. Cl.

CPC G06F 3/04842 (2013.01); H04L 61/605 (2013.01); H04L 63/065 (2013.01); H04L 63/083 (2013.01); H04L 63/104 (2013.01); H04L 67/18 (2013.01); H04M 1/27455 (2013.01); H04M 1/72519 (2013.01); H04M 1/72536 (2013.01); H04M 1/72547 (2013.01); H04M 1/72572 (2013.01); H04M 1/72583 (2013.01); H04M 3/56 (2013.01); H04M 7/006 (2013.01); H04W 4/02 (2013.01); H04W 4/021 (2013.01); H04W 4/023 (2013.01); H04W 4/021 (2013.01); H04W 4/027 (2013.01); H04W 4/026 (2013.01); H04W 4/027 (2013.01); H04W 4/026 (2013.01); H04W 4/14 (2013.01); H04W 12/02 (2013.01); H04W 12/02 (2013.01); H04W 12/06 (2013.01); H04W 12/06 (2013.01); H04W 12/06 (2013.01); H04W

12/08 (2013.01); H04W 64/00 (2013.01); H04W 68/00 (2013.01); H04W 68/04 (2013.01); H04W 76/11 (2018.02); H04W 76/15 (2018.02); H04W 76/50 (2018.02); H04W 84/18 (2013.01); H04L 61/2007 (2013.01); H04M 1/72525 (2013.01); H04M 2250/10 (2013.01); H04M 2250/22 (2013.01); H04M 2250/62 (2013.01); H04W 4/10 (2013.01); H04W 12/04 (2013.01); H04W 76/45 (2018.02); H04W 84/042 (2013.01)

(56) References Cited

U.S. PATENT DOCUMENTS

```
5,563,931 A
                 10/1996 Bishop et al.
                 11/1997
5,692,032
                          Seppanen
                 4/1998
5,742,905 A
                          Pepe et al.
5,764,898 A
                 6/1998
                         Tsuji et al.
5,898,434 A
                 4/1999
                          Small et al.
6,104,704 A
                 8/2000
                          Buhler et al.
6,108,704 A
                 8/2000 Hutton
6,119,017 A
                 9/2000 Cassidy et al.
6,128,291 A
                 10/2000 Perlman et al.
6,182,114 B1
                  1/2001
                          Yap et al.
                 3/2001
6,204,844 B1
                         Fumarolo et al.
6,232,971 B1
                 5/2001
                          Haynes
6,271,835 B1
                 8/2001
                         Hoeksma
6,292,747 B1
                 9/2001
                          Amro et al.
6,366,782 B1
                 4/2002
                          Fumarolo et al.
6,377,210 B1
                 4/2002
                         Moore
6,385,465 B1
                 5/2002
                          Yoshioka
6.434.403 B1
                 8/2002
                          Ausems et al.
6,459,440 B1
6,477,387 B1
6,487,595 B1
                 10/2002
                          Monnes et al.
                11/2002
                         Jackson et al.
                11/2002
                         Turunen et al.
6,490,521 B2
                 12/2002
                          Wiener
6,504,503 B1
                 1/2003
                         Saint Hilaire et al.
6,518,957 B1
                 2/2003 Lehtinen et al.
6,542,475 B1
                 4/2003 Bala et al.
6.549.768 B1
                 4/2003
                         Fraccaroli
6,654,683 B2
                11/2003
                         Jin et al.
6,661,353 B1
                12/2003
                         Gopen
6,662,016 B1
                12/2003
                          Buckham et al.
6,665,293 B2
                12/2003
                         Thornton et al.
6,697,734 B1
                 2/2004
                          Suomela
6,700,589 B1
                 3/2004
                         Canelones et al.
6,704,303 B1
                 3/2004
                          Bowman-Amuah
6,716,101 B1
                 4/2004
                         Meadows et al.
                 8/2004
6,772,142 B1 6,775,560 B2
                          Kelling et al.
                 8/2004
                          King et al.
6,816,878 B1
                 11/2004
                          Zimmers et al.
6,854,007 B1
                 2/2005
                          Hammond
6,867,733 B2
                 3/2005
                          Sandhu et al.
6,868,333 B2
                 3/2005
                          Melen
6,868,337 B2
                 3/2005
                          Muramatsu
6,882,856 B1
                 4/2005
                          Alterman et al.
6,885,874 B2
                 4/2005
                         Grube et al.
                 9/2005
6,941,127 B2
                          Muramatsu
7,002,952 B2
                 2/2006
                          Jones
7,024,207 B2
                 4/2006
                          Gorday et al.
7,031,700 B1
                 4/2006
                          Weaver et al.
7,031,728 B2
                 4/2006 Beyer, Jr.
7,039,040 B1
                  5/2006
                          Burg
7,103,333 B2
                 9/2006
                          Lazaridis et al.
7,158,878 B2
                  1/2007
                          Rasmussen et al.
7,194,083 B1
                 3/2007
                          Tischer et al.
7,219,303 B2
                 5/2007
                          Fish
7,271,742 B2*
                 9/2007
                         Sheha ...... G01C 21/3664
                                              340/995.19
7,292,935 B2
                 11/2007
                          Yoon
7,299,075 B2
                11/2007
                         Gottlieb et al.
7,330,112 B1
                 2/2008
                          Emigh et al.
                 4/2008 Haney
7,353,034 B2
7,386,589 B1
                 6/2008
                         Tanumihardja et al.
```

7,398,551 B2

7,421,270 B2

7/2008

Thomas et al.

9/2008 Serafat et al.

US 10,341,838 B2 Page 3

(56)	Dofoway	enes Citad		2004/6	0054429	A 1	2/2004	Shaha at al	
(56)	Referei	ices Cited			0054428 0137884		7/2004	Sheha et al. Engstrom et al.	
U.	S. PATENT	DOCUMENTS			0143391			King et al. Melen	C01C 21/26
7,426,202 B2	9/2008	Warrier et al.		2004/0	0148090	AI.	7/2004	Meleli	701/482
7,450,003 B2		Weber et al.			0157590			Lazaridis et al.	
7,454,233 B2		Lu et al.			0192299			Wilson et al. August et al.	
7,474,627 B2 7,486,648 B1		Chheda et al. Baranowski			0213215			Kakiuchi	
7,499,799 B2	2 3/2009	Park			0243710		12/2004		
7,574,353 B2 7,593,740 B2		Trombetta et al. Crowley et al.			0252050			Tengler et al. Bostrom et al.	
7,609,669 B2		Sweeney et al.		2005/0	0027705	A1	2/2005	Sadri et al.	
7,619,584 B2					0030977			Casey et al. Breed et al.	
7,630,724 B2 7,633,898 B2		Beyer, Jr. et al. Jain et al.			0113123			Torvinen	
7,672,681 B	3/2010	Beyer			0130634			Godfrey	
7,689,232 B1		Beyer Beyer, Jr.			0130666			Levy et al. Van Bosch et al.	
7,764,954 B2 7,801,134 B2		Hori et al.			0227705			Rousu et al.	
7,801,781 B2	9/2010	Olin et al.			0246419			Jaatinen Dalamay	
7,805,146 B1 7,848,765 B2		Beyer Phillips et al.			0265256			Delaney Rasmussen et al.	
7,853,273 B2	2 12/2010	Beyer		2006/0	0015407	A1	1/2006	Bernard et al.	
7,912,913 B2		Accapadi et al.			0030339			Zhovnirovsky et al. Mizuno et al.	
7,917,866 BI 8,000,724 BI		Karam Rayburn			0035647			Eisner et al.	
8,014,763 B2	9/2011	Hymes			0039353			Samuel et al.	
8,078,164 B2		Ganesan			0047825 0155871			Steenstra et al. Ilkka et al.	
8,126,441 B2 8,139,514 B2		Beyer, Jr. Weber et al.			0178128		8/2006		
8,213,970 B2	7/2012	Beyer			0218232			Kubala et al.	
8,250,155 B2 8,300,644 B2		Corry et al. Gilbert et al.			0047707 0081649			Mayer et al. Baudino	
8,364,129 B		Beyer, Jr.		2007/0	0150444	A1	6/2007	Chesnais et al.	
8,369,843 B2		Fux et al.			0153986			Bloebaum et al. Baranowski	
8,538,393 B1 8,549,285 B2		Beyer, Jr. et al. Fink et al.			0178912			Weber et al.	
RE44,716 E		Vaziri et al.		2007/0	0218885	A1	9/2007	Pfleging et al.	
8,713,302 B1		Kirchhoff			0281689			Altman et al. Altman et al.	
8,731,158 B2 8,781,089 B2		Donovan Gilboa et al.			0132243			Spalink et al.	
8,792,479 B2	2 7/2014	Bender et al.			0219416			Roujinsky	
8,880,042 B1 8,982,876 B2		Beyer, Jr. et al. Kundaje et al.			0304460		3/2010	Thermond Breed	
9,019,946 B		Rao et al.		2010/0	0125636	A1	5/2010	Kuhlke et al.	
9,408,055 B2		Beyer, Jr.			0053554			Wong et al.	
9,445,251 B2 9,467,838 B2		Beyer, Jr. et al. Beyer, Jr. et al.			0008526 0183949			Borghei Sulmar	
9,544,271 B2		McFarland et al.		2015/0	0067055	A1		Khera et al.	
9,706,381 B2		Beyer, Jr. et al.			0264167			Beyer, Jr. et al. Beyer, Jr. et al.	
9,749,829 B2 9,820,123 B2	2 8/2017	Beyer, Jr. et al. Beyer, Jr. et al.			0021522	Al	1/2015	Beyer, Jr. et al.	
2001/0026609 A	10/2001	Weinstein et al.			0057598	A1	2/2016	Beyer, Jr. et al.	
2001/0044321 A 2002/0027901 A		Ausems et al. Liu et al.			0026815			Beyer, Jr. et al. Beyer, Jr. et al.	
2002/0027901 A 2002/0061762 A		Maggenti et al.			0238158			Beyer, Jr. et al.	
2002/0064147 A	5/2002	Jonas et al.			0027111			Beyer, Jr. et al.	
2002/0115450 A 2002/0115453 A		Muramatsu Poulin et al.		2018/0	0152556	Al	5/2018	Beyer, Jr. et al.	
2002/0135615 A	9/2002	Lang			FO	REIGI	N PATE	NT DOCUMENTS	•
2002/0173906 A		Muramatsu							
2002/0194378 A 2003/0013461 A		Mizune et al.		EP			021 A1	1/2008	
2003/0081011 A	5/2003	Sheldon et al.		EP JP	Н	2348 04 358	423 A2 448 A	7/2011 12/1992	
2003/0093405 A 2003/0100326 A		Mayer Grube et al.		JP		05 303	335 A	11/1993	
2003/0100326 A 2003/0103072 A				JP JP	П		394 A	1/1996 5/1997	
2003/0103088 A	6/2003	Dresti et al.	4 (0.5	JP JP		09-113. 00-3 <i>5</i> 7.		5/1997 12/2000	
2003/0114171 A	1 * 6/2003	Miyamoto H04W 455/4		JP	20	002077	372 A	3/2002	
2003/0128195 A	7/2003	Banerjee et al.	50.1	JP JP		02-245: 02-277:		8/2002 9/2002	
2003/0139150 A	7/2003	Rodriguez et al.		JP		02-277		5/2003	
2003/0149527 A 2003/0200259 A				JP		003230		8/2003	
2003/0200239 A 2003/0217109 A		Ordille et al.		JP JP)03264)07532		9/2003 11/2007	
2003/0224762 A	1 12/2003	Lau et al.		WO	WO-2	002/17	567 A2	2/2002	
2003/0229441 A	1* 12/2003	Pechatnikov G01C 2		WO			532 A3	4/2002	
		701	/411	WO	w O-20	U3/U/T	825 A1	8/2003	

Page 4

(56) References Cited

FOREIGN PATENT DOCUMENTS

WO	WO-03/074973 A2	9/2003
WO	WO-2003/096660 A1	11/2003
WO	WO-2008/030702 A2	3/2008
WO	WO-2008027891 A2	3/2008
WO	WO-2008/118878 A2	10/2008

OTHER PUBLICATIONS

U.S. Appl. No. 15/469,469, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, filed Mar. 24, 2017. U.S. Appl. No. 15/255,046, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, filed Sep. 1, 2016. Batayneh, Fahd A., Location Management in Wireless Data Networks. Apr. 21, 2006, 24pgs. Available on the Internet at https://www.cse.wustl.edu/~jain/cse574-06/ftp/wireless_location/index.

Ramjee, et al. IP-Based Access Network Infrastructure for Next-Generation Wireless Data Networks. IEEE Personal Communications, Aug. 2000. 8 pgs.

Toppila, Pekka. TCP/IP in Cellular Mobile Environment. 1999, 7pgs.

IBM, Transmission Control Protocol / Internet Protocol. 2pgs. Available on the Internet at www.ibm.com/support/knowledgecenter/en/ssw_aix_61/com.ibm.aix.networkcomm/tcpip_intro.htm.

Microsoft Corporation. Communication Services and Networking (Windows CE 5.0). 2006, 6pgs. Available on the Internet at https://msdn.microsoft.com/en-us/library/ms880996.aspx.

Zetter, Kim. How Attackers Can Use Radio Signals and Mobile Phones to Steal Protected Data. WIRED, Nov. 3, 2004. 5pgs. Available on the Internet at www.wired.com/2014/11/airhopper-hack/

Kutscher, Dirk et al. Drive-thru Internet: IEEE 802.11b for "Automobile" Users. IEEE Infocom, Mar. 7, 2004. 12pgs.

DIGI, Remote Cellular TCP/IP to Rockwell Ethernet and Serial Devices. 37pgs.

Batista, E., "Your Boss May Know Where You Are," Wired News, May 31, 2002; 2pgs.

Benefon ESC! GSM + GPS Personal Navigation Phone, 1999, Benefon Oyj, Salo, Finland; 4pgs.

Edlund, T. and Ciber, S., "Mobile Services for Truck Drivers," Master Thesis in Mobile Informatics, IT University of Goleborg, Sweden; 2003; 50pgs.

Garmin rino 110 2-way Radio & Personal Navigator; Owner's Manual and Reference Guide; Apr. 2003; 88pgs.

Gate5, "Mobile Community Solution: Context-sensitive Application Suite for Mobile Communities," 2002; 3pgs.

Gate5, "Mobile Guide Solution: Context-sensitive Applications for PDA-based Mobile City and Travel Guides," 2002; 4pgs.

Int'l Preliminary Report on Patentability (IPRP); for Int'l Patent

App. No. PCT/JP2004/000250 dated Jul. 5, 2005; 4pgs. Kim, R., "Find Friends by Cell Phone/Loop! Application's GPS Program Can Beam Map Location," SFGate; Nov. 14, 2006; 2pgs.

Program Can Beam Map Location," SFGate; Nov. 14, 2006; 2pgs. Life360's Rule 50(a) Motion for Judgment as a Matter of Law; AGIS, Inc. v. Life360, Inc. (S.D. FI.); Mar. 12, 2015; 27pgs.

LocatioNet LBS Applications: MyMap description web page, published before 2004 upon information and belief; 13pgs.

LocatioNet Press Release: "LocatioNet Releases Ground Breaking Mass Market LBS Application Suite—LocatioNet MyMap," Mobile Location Services Congress; May 6, 2003; 2pgs.

Luna, L., "This Man Knows You Live . . . and Work and Play," Wireless Review; Sep. 1, 2002; pp. 24-32.

Meggers, J. And Sang-Bum Parl, A, "A Multimedia Communication Architecture for Handheld Devices," IEEE Paper 0-7803-4872-9/98, Sep. 8-11, 1998; pp. 1245-1249.

Memory Map Remote Tracking, available on the Internet at https://web.archive.org/web/20060202161013/hltp:l/memory-map.com/; 2pgs. Plaintiff Advanced Ground Information Systems, Inc.'s Motions in Limine; AGIS, Inc. v. Life360, Inc. (S.D. FI.); Feb. 19, 2015; 54pgs.

PRNewswire, "Trimble GPS Technology Enables Seiko Epson; Communication Device and Wireless Data Service," accessed on the internet at: http://www.printthis.clickability.com/pt/cpt?expire=&title=Trimble+GPS+Technology+Enables+Seiko+Epson+Communication+Device+and+Wireless+Data+S...; downloaded Jun. 16, 2016; 4pgs.;.

The Gate5 system, which, upon information and belief, was sold and/or publicly used within the U.S. prior to 2004 and at least as early as 2002.

The LocatioNet system which, upon information and belief, was sold and/or publically used within the U.S. prior to 2004 and at least as early as 2003; 6pgs.

Östman, L., "A Study of Location-Based Services Including a Design and Implementation of an Enhanced Friend Finder Client with Mapping Capabilities," Lulea Tekniska Univeritet; Aug. 31, 2001; 63pgs.

"911 and E911 Services," Federal Communications Commission, updated Mar. 1, 2018, available at https://www.fcc.gov/general/9-1-1-and-e9-1-1-services (last visited May 7, 2018) (6 pages).

"AGIS Introduces Landmark Mobile Networking," dated Jun. 18, 2007, available as of Aug. 7, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070807202449/http://www.agisinc.com/AGIS_announcement.pdf (3 pages).

"AGIS Mobile Communication & Collaboration Software Being Used by Naval Coastal Warfare Squadron," available as of Aug. 7, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070807202431/http://www.agisinc.com/AGIS_US_Navy_photofeature.pdf (2 pages).

"BuddySpace Downloads," dated May 1, 2007, publication date unknown, available at: http://projects.kmi.open.ac.uk/buddyspace/downloads/downloads.html (3 pages).

"Cellular Mobile Pricing Structures and Trends," Organisation for Economic Co-operation and Development, Working Party on Telecommunications and Information Service Policies, May 16, 2000 (103 pages).

"Email," Wikipedia, https://en.wikipedia.org/wiki/Email (last visited May 10, 2018) (19 pages).

"Fact Sheet: FCC Wireless 911 Requirements," Federal Communications Commission, Jan. 2001, available at https://transition.fcc.gov/pshs/services/911-services/enhanced911/archives/factsheet_requirements_012001.pdf (4 pages).

"Force XXI Battle Command, Brigade and Below (FBCB2)," available as of Feb. 4, 2017 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20170204113146/http://www.dote.osd.mil/pub/reports/FY1999/pdf/army/99fbcb2.pdf (4 pages).

"Frequently Asked Questions," BuddySpace.org, available as of Apr. 23, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070423184018/http://kmi.open.ac.uk:80/projects/buddyspace/faq.html (11 pages). "Frequently Asked Questions," BuddySpace.org, available as of

Freduentry Asked Questions, Buddyspace.org, available as of Feb. 3, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040204032758/http://kmi.open.ac.ulc:80/projects/buddyspace/faq.html (4 pages). "History of Mobile Phones," Wikipedia, https://en.wikipedia.org/

"History of Mobile Phones," Wikipedia, https://en.wikipedia.org/wiki/History_of_Mobile_phones (last visited May 10, 2018) (14 pages).

"How It Works: The Navizon Wireless Positioning System," Navizon. com, available as of Feb. 19, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060219075647/http://www.navizon.com:80/FullFeatures. htm (8 pages).

"Introduction & Philosophy: Presence in a Nutshell," publication date unknown, available at: http://projects.kmi.open.ac.uk/buddyspace/intro-philosophy.html (3 pages).

"mMode Features: Find Friends," AT&T Wireless, available as of Jun. 18, 2003 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/20030618175223/http://www.attwireless.com:80/mmode/features/findit/FindFriends/(2 pages).

Page 5

(56) References Cited

OTHER PUBLICATIONS

"Navizon: The first Peer-to-Peer Wireless Positioning System that successfully blends GPS +WiFi + Celluar signals together into one accurate and powerful Mobile Geo-Location System," Navizon. com, available as of Dec. 18, 2005 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20051218105454/http://www.navizon.com:80/index.htm (2 pages). "Palm VII," Wikipedia, https://en.wikipedia.org/wiki/Palm_VII (last visited May 10, 2018) (2 pages).

"Simon Says 'Here's How!' Simon Mobile Communications Made Simple," Simon Users Manual, IBM Corp., copyright 1994 (41 pages).

"UCSD ActiveCampus," available as of Feb. 6, 2003 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/20030206012106/http://activecampus.ucsd.edu/(3 pages).

"USCD Active Campus," available as of Aug. 29, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040829191734/http://activecampus.ucsd.edu/ (3 pages).

"Voice Over Internet Protocol (VoIP)," Federal Communications Commission, publication date unknown, updated at least as recently as May 13, 2009, available at https://www.fcc.gov/general/voice-over-internet-protocol-voip (last visited May 10, 2018) (11 pages). Active Campus, "ActiveCampus—Sustaining Educational Communities through Mobile Technology," copyright 2002, available as of Nov. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20041125060305/http://activecampus.edu:80/slides/active-campus-hpl (35 pages).

Active Campus, "New Features in Active Campus (Apr. 2003)," available as of Sep. 1, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060901101253/https://activecampus.ucsd.edu/new-features.php (3 pages).

AGIS, "AGIS First Responders, Mobile Online Group Collaboration," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070710230256/http://www.agisinc.com/FirstResponders.asp (2 pages).

AGIS, "Frequently Asked Questions About AGIS," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20070710224856/http://www.agisinc.com/Faq.asp (3 pages).

AGIS, "Mobile Social Networking," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: http://web.archive.org/web/20070710224939/http://www.agisinc.com/Social Networking.asp (1 page).

AGIS, "Track and Collaborate with Your Entire Team," available as of Jul. 10, 2007 according to Wayback Machine Internet Archive Record, obtained from: http://web.archive.org/web/20070710225045/http://www.agisinc.com/Business.asp (2 pages.).

Apple Newton, Wikipedia, https://en.wikipedia.org/wiki/Apple_Newton (last visited May 10, 2018) (10 pages).

APRS Working Group. "Automatic Position Reporting System: APRS Protocol Reference, Protocol Version 1.0," Aug. 29, 2000, available at: http://studylib.net/doc/18674143/aprs-protocol-specification (128 pages).

Baard, M. "A Connection in Every Spot," Wired News, Oct. 16, 2003, available at: https://web.archive.org/web/20031127042047/http://www.wired.com:80/news/print/0,1294,60831,00.html (3 pages). Bachler, M. et al. "Collaboration in the Semantic Grid: a Basis for e-Learning," publication date unknown, available at: http://oro.open. ac.uk/6202/1/aai coakting-2005-preprint-krp.pdf (19 pages).

Bruninga, B. "APRS SPEC Addendum 1.1," publication date unknown, available at: http://www.aprs.org/aprs11.html (4 pages).

Bruninga, B. "APRS Tiny Web Pages," Sep. 2000, available at: http://aprs.org/TWP.html (7 pages).

Bruninga, B. "Automatic Packet/Position Reporting System (APRS)," dated Sep. 18, 2002, available at: http://aprs.org/APRS-docs/APRS. TXT (6 pages).

Bruninga, B. "Cellular Automatic Position Reporting System (APRS)", dated Jul. 7, 1999, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725024219/http://web.usna.navy.mil: 80/~bruninga/APRS-docs/CELLULAR.TXT (1 page).

Bruninga, B. "Generic Callsigns for National APRS Events," dated Oct. 20, 2005, available at: http://aprs.org/aprs-jota.txt (1 page).

Bruninga, B. "Potential APRS Map of JOTA Contacts," publication date unknown, obtained from: http://www.aprs.org/cgsrvr.html (last visited Nov. 28, 2017) (4 pages).

Bruninga, B. "Tips for Mobile APRS Users," dated Jan. 2, 2004, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725035443/http://web.usna.navy.mil:80/~bruninga/APRS-docs/MOBILE.TXT (4 pages).

Bruninga, B. "Touch Screen Display mods in APRStch.EXE," dated Apr. 17, 2000, available as of Jul. 25, 2004 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20040725034727/http:web.usna.navy.mil:80/~bruninga/APRS-docs/TOUCH.TXT (2 pages).

Carter, J. "Build an APRS Encoder Tracker," QST, Feb. 2002 (5 pages).

Charny, B. "Find a Wireless Friend—for a fee," Cnet, Jun. 24, 2002, available at: https://www.cnet.com/news/find-a-wireless-friend-fora-fee/ (2 pages).

Charny, B. "New cell feature helps find friends," Cnet, Jun. 25, 2002, available at: https://www.cnet.com/news/new-cell-feaure-helps-find-friends/ (5 pages).

Chen, Ching-Chen et al. "Automatically and Accurately Conflating Satellite Imagery and Maps," In Proceedings of the International Workshop on Next Generation Geospatial Information, Oct. 2003 (4 pages).

Christie, Jock et al. "Development and Deployment of GPS Wireless Devices for E911 and Location Based Services," Position, Location and Navigation Symposium, Palm Springs California, Apr. 15-18, 2002 (6 pages).

Cohen, Deborah. "Digital note-passing gains respect among adults," USAToday.com, Nov. 26, 2004, available at: https://usatoday30.usatoday.com/tech/products/services/2004-11-26-im-gains-cred_x. htm (2 pages).

Conatser, J. et al. "Force XXI Battle Command Brigade and Below-Blue Force Tracking (FBCB2-BFT). A Case Study in the Accelerated Acquisition of a Digital Command and Control System during Operations Enduring Freedom and Iraqi Freedom," dated Dec. 2005, available at www.dtic.mil/dtic/tr/fulltext/u2/a443273. pdf (73 pages).

Curriculum Vitae of William Griswold, available at: https://cseweb.ucsd.edu/~wgg/CV.pdf (29 pages).

Definition of "Subnetting," Techopedia, available at https://www.techopedia.com/definition/28328/subnetting as of May 10, 2018 (2 pages).

Dunn, R.J. III. "Blue Force Tracking: The Afghanistan and Iraq Experience and Its Implications for the U.S. Army," Northrop Grumman, 2003, available at: http://www.northropgrumman.com/AboutUs/AnalysisCenter/Documents/pdfs/BFT-Afghanistan-and-Iraq-Exper.pdf (20 pages).

Durso, Fred. "A Decade of Difference," NFPA Journal, Sep. 1, 2011, available at https://www.nfpa.org/News-and-Research/Publications/NFPA-Journal/2011/September-October-2011/Features/A-Decade-of-Difference (6 pages).

Eisenstadt, M. et al. "BuddySpace: Enhanced Presence Management for Collaborative Learning, Working, Gaming and Beyond," submitted to JabberCon Europe 2002, publication date unknown, available at: https://pdfs.semanticsscholar.org/8f3d/d07b4e9f3095b949e78de9a2be439e98e663.pdf (6 pages).

Grier, Robin. "VoIP—How to Use It to Cut Costs and Enhance Radio Access," Radio Resource Magazine, Jul. 2000 (4 pages). Griswold, W. et al. "Active Campus—Sustaining Educational Communities through Mobile Technology," Technical Report CS2002-0714, University of California at San Diego, Jul. 2002, available at: https://pdfs.sematicsscholar.org/2de1/

e05b22889171425bca873a66fd9f19ecda0c.pdf (19 pages).

Page 6

(56) References Cited

OTHER PUBLICATIONS

Griswold, W. et al. "ActiveCampus—Experiments in Community-Oriented Ubiquitous Computing," University of California at San Diego, published no later than Oct. 2004, available at https://cseweb.ucsd.edu/~wgg/Abstracts/ac-handhelds.pdf (8 pages).

Griswold, W. et al. "Using Mobile Technology to Create Opportunistic Interactions on a University Campus" Technical Report CS2002-0724, University of California at San Diego, Sep. 2002, available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10. 1.1.14.8249&rep=rep1&type=pdf (6 pages).

Hatfield, Dale N. "A Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services," provided to the Federal Communications Commission on Oct. 15, 2002, (54 pages).

Horzepa, S. "APRS: Moving Hams on Radio and the Internet; A Guide to the Automatic Reporting System," The American Radio Relay League, Inc., copyright 2004 (156 pages).

Horzepa, S. "High-Speed Digital and Multimedia Working Group Is On," QST, Jun. 2002 (1 page).

Ion, Florence. "From touch displays to the Surface: A brief history of touchscreen technology," Arstechnica, https://arstechnica.com/gadgets/2013/04/from-touch-displays-to-the-surface-a-brief-history-of-touchscreen-technology/, Apr. 4, 2013 (22 pages).

IPR2018-00817, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Apple Inc., Mar. 22, 2018 (85 pages). IPR2018-00818, Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, filed on behalf of Apple, Inc., Mar. 22, 2018 (86 pages). IPR2018-00819, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Apple, Inc., Mar. 22, 2018 (91 pages). IPR2018-00821, Petition for Inter Partes Review of U.S. Pat. No. 8,213,970, filed on behalf of Apple, Inc., Mar. 22, 2018 (85 pages). IPR2018-01079, Petition for Inter Partes Review of U.S. Pat. No. 8,213,970, filed on behalf of Google, LLC, May 15, 2018 (89 pages).

IPR2018-01080, Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, filed on behalf of Google LLC, May 15, 2018 (87 pages). IPR2018-01081, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (64 pages).

IPR2018-01082, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (72 pages).

IPR2018-01083, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (72 pages).

IPR2018-01084, Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, filed on behalf of Google, LLC, May 15, 2018 (82 pages).

IPR2018-01085, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (76 pages).

IPR2018-01086, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (82 pages).

IPR2018-01087, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (76 pages).

IPR2018-01088, Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, filed on behalf of Google, LLC, May 15, 2018 (83 pages).

Klabunde, Tim. "The Benefits of a VoIP Dispatch System," Mission Critical Communications, Aug. 2004 (3 pages).

Lehman, J. "APRS and Search and Rescue," QST, Sep. 2003 (3 pages).

Lehman, J. "ARPS and Search and Rescue—Part 2," QST, Oct. 2003 (3 pages).

McKinsey & Company. "Untitled Report," 2002 (133 pages). Mock, John H. et al. "A voice over IP solution for mobile radio interoperability," In Proceedings of IEEE 56th Vehicular Technology Conference, Sep. 2002 (4 pages).

Perkins, Charles E. "Ad Hoc Networking, An Introduction," Nokia Research Center, Nov. 28, 2000 (28 pages).

Rashbaum, William K. "Report on 9/11 Finds Flaws in Response of Police Dept," Jul. 27, 2002, available at https://www.nytimes.com/2002/07/27/nyregion/report-on-9-11-finds-flaws-in-response-of-police-dept.html (4 pages).

Rotondo, Rick. "Locate—Track—Extract, Wireless Mesh Networking Allows Commanders to Keep Track of Firefighters at an Incident Scene," Public Safety Report, Mar. 2004 (3 pages).

Shareloc's Blog. "In Case You Were Wondering, We've Been Working . . . ," Navizon.com, available as of Feb. 20, 2006 according to Wayback Machine Internet Archive Record, obtained from: https://web.archive.org/web/20060220062317/http://navizon.typepad.com:80/ (7 pages).

Sharp, Duncan Scott. "Adapting Ad Hoc Network Concepts to Land Mobile Radio Systems," Thesis, Master of Engineering, University of Alberta, copyright Dec. 2002 (98 pages).

Simon, S. "The Pocket PC Goes Tactical," Law Enforcement Technology, May 2006, obtained from: https://web.archive.org/web/20070807202413/http://www.agisinc.com/Eprint_AGIS_4pg.pdf (4 pages).

Subbarao, Madhavi. "Mobile Ad Hoc Data Networks for Emergency Preparedness Telecommunications—Dynamic Power-Conscious Routing Concepts," Wireless Communications Technologies Group, Submitted as an interim project report on Feb. 1, 2000 (16 pages).

The ActiveCampus System, alleged in adverse proceedings to have been made available to the public no later than Oct. 30, 2005 by the University of California San Diego.

The AGIS LifeRing Project and its prototypes, alleged in adverse proceedings to have been made available to the public by Oct. 30, 2005 by AGIS.

The AT&T Find Friends System, alleged in adverse proceedings to have been made available to the public no later than Jun. 24, 2002 by AT&T.

The Automatic Packet/Position Reporting System, alleged in adverse proceedings to have been made available to the public no later than Sep. 21, 2004 by Bob Bruninga.

The BuddySpace system, alleged in adverse proceedings to have been made available to the public at least by Jun. 2002 and no later than Sep. 21, 2004 by the Open University.

The Force XXI Battle Command, Brigade and Below System, alleged in adverse proceedings to have been made available to the public no later than Mar. 21, 2003 by the U.S. Army.

The Navizon System, alleged in adverse proceedings to have been made available to the public at least by Oct. 30, 2005 and no later than Feb. 20, 2006 by Navizon Inc.

Trupiano, Michael. "A Taxonomy for Assessing Fitness of Mobile Data Services in US Consumer Markets," Thesis, Master of Engineering, submitted to Massachusetts Institute of Technology on Feb. 1, 2001 (105 pages).

Vogiazou, Y. et al. "BuddySpace: Large-Scale Presence for Communities at Work and Play," Tech Report KMi-03-14, dated Sep. 2003 (8 pages).

Vogiazou, Y. et al. "From Buddyspace to CitiTag: Large-Scale Symbolic Presence for Community Building and Spontaneous Play," Tech Report KMi-04-25, dated Nov. 2004 (8 pages).

Vriendt, Johan De. et al. "Mobile Network Evolution: A Revolution on the Move," IEEE Communications Magazine, Apr. 2002 (8 pages).

Defendant's Disclosure Pursuant to Patent Local Rule 4-2 of Preliminary Claim Constructions and Extrinsic Evidence, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), May 18, 2018 (27 pages).

P.R. R 4-3—Joint Claim Construction and Prehearing Statement, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jun. 15, 2018 (9 pages).

Appendix 1 to P.R. 4-3—Joint Claim Construction and Prehearing Statement—Parties' Proposed Constructions and Supporting Evidence, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jun. 15, 2018 (131 pages).

Page 7

(56) References Cited

OTHER PUBLICATIONS

Patent Owner's Preliminary Response, filed in IPR 2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Jul. 5, 2018 (53 pages).

Patent Owner's Preliminary Response, filed in IPR 2018-00818 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Jul. 5, 2018 (38 pages).

Patent Owner's Preliminary Response, filed in IPR 2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Jul. 24, 2018 (50 pages).

P.R. R 4-3—Updated Joint Claim Construction and Prehearing Statement, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jul. 23, 2018 (9 pages).

Appendix 1 to P.R. 4-3—Updated Joint Claim Construction and Prehearing Statement—Parties' Proposed Constructions and Supporting Evidence, filed in *AGIS Software Development LLC* v. *Huawei Device USA, Inc.* on Jul. 23, 2018 (125 pages).

Petitioner's Motion Under 37 C.F.R. § 42.104(C) to Correct Clerical Errors in the Petition, IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (7 pages).

3G TS 23.040 V1.0.0 (May 1999) Technical Specification (p. 6); Exhibit 20 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (*E.D. Texas*), Document 175-21 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages).

Appendix A: Comparison of Method and "Device" Claims; Attachment #24 to Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175-24 in Case 2:17-cv-513, Aug. 14, 2018 (7 pages).

Appendix A: Joint Claim Construction Chart; Attachment #1 to Joint Claim Construction Chart Pursuant to P.R. 4-5(D), filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 194 in Case 2:17-cv-513, Aug. 27, 2018 (118 pages).

Appendix B: Comparison of '838 Patent Disclosures and Similar Disclosures in '728 Patent; Attachment #25 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (*E.D. Texas*), Document 175-25 in Case 2:17-cv-513, Aug. 14, 2018 (3 pages).

Apple Computer, Inc. Macintosh Human Interface Guidelines, 1992 (410 pages); Exhibit 1009 in IPR2018-00821 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 8,213,970).

Apple Inc.'s Final Election of Prior Art References, AGIS Software Development LLC v. Apple Inc. (E.D. Texas), 2:17-cv-513, Aug. 29, 2018 (15 pages).

Apple's Answer to AGIS's Original Complaint for Patent Infringement, filed in AGIS Software Development LLC v. Apple Inc. (E.D. Texas), Document 20 in Case 2:17-cv-516, Aug. 28, 2017 (14 pages).

Apple's Answer to Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple Inc. (E.D. Texas)*, Document 36 in Case 2:17-cv-516, Oct. 2, 2017 (16 pages).

Apple's First Amended Answer to Plaintiff's First Amended Complaint for Patent Infringement, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 148 in Case 2:17-cv-513, Jun. 15, 2018 (23 pages).

D. Ball et al. How to Do Everything with Your Treo 600, 2004 (pp. 25-30); Exhibit 1019 in IPR2018-00821.

Bederson, Benjamin B. Fisheye Menus. Proceedings of the ACM Symposium on User Interface Software and Technology, 2000 (pp. 217-225); Exhibit 1015 in IPR2018-00821.

Claim Construction Hearing Before the Honorable Chief Judge Rodney Gilstrap (United States District Judge), *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), 2:17-cv-513, Sep. 13, 2018 (109 pages).

Claim Construction Memorandum and Order, issued in AGIS Software Development LLC v. Huawei Device USA Inc., et al. (E.D. Texas), Document 205 in Case 2:17-cv-513, Oct. 10, 2018; also Exhibit 1041 in IPR2018-01080 (60 pages).

Claim Construction Order, issued in *Automated Packaging Systems, Inc. v. Free Flow Packaging International, Inc.* (N. D. Cal.), Document 217 in Case 3:18-cv-356, Aug. 2, 2018 (44 pages); Exhibit 1025 in IPR2018-00817.

Corrected Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (76 pages).

Corrected Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (83 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Oct. 23, 2018 (35 pages).

Decision: Institution of Inter Partes Review, IPR2018-00819 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 7, 2018 (38 pages).

Declaration of Chris G. Bartone, Ph.D., P.E. in Support of Defendants Huawei Device USA Inc. et al.'s Responsive Claim Construction Brief; Attachment #23 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-23 in Case 2:17-cv-513, Aug. 14, 2018 (105 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 8 213 970. Exhibit J to Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Case 2:17-cv-513, Jul. 26, 2018 (124 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,408,055; Exhibit 1003 in IPR2018-01080 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), May 15, 2018 (138 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01081 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (93 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01082 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (102 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01083 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (105 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251; Exhibit 1003 in IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), May 15, 2018 (116 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01085 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (102 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01086 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (111 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01087 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (106 pages).

Declaration of David Hilliard Williams in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838; Exhibit 1003 in IPR2018-01088 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), May 15, 2018 (125 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,445,251, Exhibit 1002 in IPR2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Mar. 22, 2018 (153 pages).

Page 8

(56) References Cited

OTHER PUBLICATIONS

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,408,055, Exhibit 1002 in IPR2018-00818 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), Mar. 22, 2018 (115 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,467,838, Exhibit 1002 in IPR2018-00819 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Mar. 22, 2018 (186 pages).

Declaration of Dr. Benjamin B. Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 9,749,829, Exhibit 1002 in IPR2018-01471 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,749,829), Jul. 31, 2018 (114 pages).

Declaration of Dr. Benjamin Bederson in Support of Petition for Inter Partes Review of U.S. Pat. No. 8 213 970. Exhibit I to Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Case 2:17-cv-513, Jul. 26, 2018 (148 pages).

Declaration of Dr. Jaime G. Carbonell in Support of Plaintiff's Opening Claim Construction Brief; Exhibit H to Plaintiff AGIS-Software Development LLC's Opening Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 16510 in Case 2:17-cv-513, Jul. 26, 2018 (43 pages).

Declaration of Kerri-Ann Limbeed in Support of Defendants' Responsive Claim Construction Brief; Attachment #1 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-1 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages). Defendant Apple's Amended Patent Rule 3-3 Invalidity Contentions, *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), 2:17-cv-513, Apr. 16, 2018 (49 pages).

Defendant LG Electronics Inc.'s Answer to Plaintiff's Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *LG Electronics, Inc. (E.D. Texas)*, Document 83 in Case 2:17-cv-514, Oct. 12, 2018 (22 pages).

Defendants Huawei Device USA Inc. et al.'s Answer to Plaintiff's First Amended Complaint for Patent Infringement, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 29 in Case 2:17-cv-513, Oct. 5, 2017 (20 pages). Defendants Huawei Device USA Inc. et al.'s Preliminary Election of Prior Art References, AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), 2:17-cv-513, Apr. 30, 2018 (7 pages).

Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175 in Case 2:17-cv-513, Aug. 14, 2018 (56 pages).

Exhibit 1009 in IPR2018-01081 ("Microsoft Word document compare of specifications between U.S. Pat. No. 7,630,724 to Beyer, Jr. et al. and U.S. Pat. No. 7,031,728 to Beyer, Jr. et al."), May 15, 2018 (33 pages)10.

Exhibit 1010 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/711,490 and U.S. Appl. No. 11/308,648") in IPR2018-00817, Mar. 22, 2018 (94 pages).

Exhibit 1011 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/308,648 and U.S. Appl. No. 11/615,472") in IPR2018-00817, Mar. 22, 2018 (122 pages).

Exhibit 1012 ("Computer-generated document comparison showing differences in U.S. Appl. No. 11/615,472 and U.S. Appl. No. 12/761,533") in IPR2018-00817, Mar. 22, 2018 (94 pages).

Exhibit 1017 ("Computer-generated document comparison showing differences in U.S. Appl. No. 14/027,410 and U.S. Appl. No. 11/308,648") in IPR2018-00817, Mar. 22, 2018 (117 pages).

Exhibit 1020 in IPR2018-00821 ("Redline comparison between the specifications of U.S. Appl. No. 11/612,830 and U.S. Pat. No. 8,213,970"), Mar. 22, 2018 (90 pages).

Exhibit 1031 in IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Transcript of teleconference between Board and Parties, Oct. 26, 2018 (22 pages).

Exhibit 1032 in IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Document showing differences between Petition and Corrected Petition in redline, Oct. 31, 2018 (77 pages).

Exhibit 1032 in IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Document showing differences between Petition and Corrected Petition in redline, Oct. 31, 2018 (84 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in AGIS Software Development LLC v. Apple, Inc. (E.D. Texas), Case 2:17-cv-516, also Exhibit 1008 in IPR2018-00821, Mar. 22, 2018 (39 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against HTC Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (42 pages). Exhibit A for U.S. Pat. No. 8,213,970 Against Huawei Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Case 2:17-cv-513, Nov. 28, 2017 (36 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc. (E.D. Texas)*, 2:17-cv-515, Nov. 28, 2017 (36 pages).

Exhibit A for U.S. Pat. No. 8,213,970 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. ZTE Corp et al. (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (41 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against HTC Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (979 pages). Exhibit B for U.S. Pat. No. 9,408,055 Against HUAWEI Accused Products; Attachment to Plaintiff's Infringement Contentions in AGIS Software Development LLC v. Huawei Device USA Inc., et al. (E.D. Texas), Case 2:17-cv-513; also Exhibit 1010 in IPR2018-01080, May 15, 2018 (889 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc. (E.D. Texas)*, 2:17-cv-515, Nov. 28, 2017 (902 pages).

Exhibit B for U.S. Pat. No. 9,408,055 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (1001 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in AGIS Software Development LLC v. Apple, Inc. (E.D. Texas), Case 2:17-cv-516; also Exhibit 1014 in IPR2018-00817, Mar. 22, 2018 (120 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against HTC Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), 2:17-cv-514, Jan. 19, 2018 (313 pages). Exhibit C for U.S. Pat. No. 9,445,251 Against Huawei Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Case 2:17-cv-513, Nov. 28, 2017 (314 pages).

Exhibit C for U.S. Pat. No. 9,445,251 Against LG Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (*E.D. Texas*), 2:17-cv-515, Nov. 28, 2017 (335 pages).

Page 9

(56) References Cited

OTHER PUBLICATIONS

Exhibit C for U.S. Pat. No. 9,445,251 Against ZTE Accused Products; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. ZTE Corp et al. (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (314 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against Apple Accused Products; Attachment to Plaintiff's Preliminary Infringement Contentions in *AGIS Software Development LLC v. Apple, Inc. (E.D. Texas)*, Case 2:17-cv-516; also Exhibit 1014 in IPR2018-00819, Mar. 22, 2018 (381 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against HTC; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *HTC Corp. (E.D. Texas)*, 2:17-cv-514, Jan. 19, 2018 (329 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against Huawei; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (*E.D. Texas*), Case 2:17-cv-513, Nov. 28, 2017 (312 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against LG; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (*E.D. Texas*), 2:17-cv-515, Nov. 28, 2017 (329 pages).

Exhibit D—Claim Chart for U.S. Pat. No. 9,467,838 Against ZTE; Attachment to Plaintiff's Disclosure of Asserted Claims and Infringement Contentions in *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (329 pages).

GeoTIFF Format Specification, GeoTIFF Revision 1.0, Specification Version 1.8.1, Oct. 31, 1995 (102 pages); Exhibit 1018 in IPR2018-00817.

Hornback, K. et al. Navigation Patterns and Usability of Zoomable User Interfaces with and without an Overview. ACM Transactions on Computer-Human Interaction, v. 9, n. 4, Dec. 2002 (pp. 362-369); Exhibit 1019 in IPR2018-00817.

HTC Corporation et al.'s Prior Art Listed in Their Invalidity Contentions, AGIS Software Development LLC v. HTC Corporation et al. (E.D. Texas), Case 2:17-cv-514, Aug. 30, 2018 (7 pages).

HTC Corporation's Answer, Defenses, and Counterclaims to AGIS Software Development, LLC's Complaint for Patent Infringement, filed in AGIS Software Development LLC v. HTC Corp. Inc. (E.D. Texas), Document 82 in Case 2:17-cv-514, Oct. 12, 2018 (19 pages). HTC Corporation's Preliminary Election of Prior Art References, AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), 2:17-cv-514, Apr. 30, 2018 (6 pages).

Index of Exhibits to Apple's Invalidity Contentions, AGIS Software Development LLC v. LG Electronics, Inc. et al. (E.D. Texas), Case 2:17-cv-516, Dec. 1, 2017 (11 pages).

Joint Claim Construction Chart Pursuant to P.R. 4-5(D), filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 194 in Case 2:17-cv-513, Aug. 27, 2018 (4 pages).

Joint Motion to Stay All Deadlines and Notice of Settlement Regarding Huawei Defendants, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas)*, Document 221 in Case 2:17-cv-513, Nov. 5, 2018 (6 pages).

MapInfo Professional User's Guide Version 7.0, 2002 (752 pages); Exhibit 1021 in IPR2018-00817.

MapInfo. Spatially Enhancing Business Data with Geocoding Solutions: A MapInfo White Paper, 1997 (15 pages); Exhibit 1020 in IPR2018-00817.

Microsoft Computer Dictionary, Fifth Edition, 2002 (p. 479); Exhibit 21 to Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175-22 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages).

Microsoft Computer Dictionary, Fifth Edition, 2002 (p. 502); Exhibit 12 to Defendants' Responsive Claim Construction Brief, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Document 175-13 in Case 2:17-cv-513, Aug. 14, 2018 (4 pages).

Mockapetris, P. Network Working Group of Internet Engineering Task Force, Request for Comments 1034, Domain Names—Concepts and Facilities, Nov. 1987 (55 pages); Exhibit 1024 in IPR2018-00817.

Nielsen, J. Usability Engineering, 1993 (pp. 129-148); Exhibit 1017 in IPR2018-00821.

Norman, Donald A. The Psychology of Everyday Things, Chapter 1, The Psychopathology of Everyday Things, 1999 (pp. 1-33); Exhibit 1016 in IPR2018-00821.

Oxford American Dictionary of Current English, 1999 (p. 213); Exhibit 3 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (*E.D. Texas*), Document 175-4 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages).

Patent Owner's Supplemental Preliminary Response to Corrected Petition for Inter Partes Review, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 7, 2018 (6 pages).

Patent Owner's Supplemental Preliminary Response to Corrected Petition for Inter Partes Review, IPR2018-01088 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 7, 2018 (6 pages).

Petitioner's Motion Under 37 C.F.R. § 42.104(C) to Correct Clerical Errors in the Petition, IPR2018-01087 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Oct. 31, 2018 (7 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01083 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Nov. 1, 2018 (9 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01085 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Sep. 19, 2018 (9 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Nov. 1, 2018 (6 pages).

Plaintiff / Counterclaim-Defendant AGIS Software Development LLC Answer to Declaratory Judgment Counterclaims of Defendant / Counterclaim-Plaintiff HTC Corporation, filed in AGIS Software Development LLC v. HTC Corp. et al. (E.D. Texas), Document 86 in Case 2:17-cv-514, Nov. 2, 2018 (8 pages).

Plaintiff AGIS Software Development LLC's Opening Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (*E.D. Texas*), Document 165 in Case 2:17-cv-513, Jul. 26, 2018 (41 pages).

Plaintiff AGIS Software Development LLC's Reply Claim Construction Brief, filed in *AGIS Software Development LLC v. Huawei Device USA Inc. et al.* (E.D. Texas), Document 186 in Case 2:17-cv-513, Aug. 20, 2018 (29 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC v. Apple, Inc. (E.D. Texas)*, Case 2:17-cv-516, Sep. 18, 2017; also Exhibit 1016 in IPR2018-00817 (12 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), 2:17-cv-513, Nov. 28, 2017 (18 pages).

Plaintiff Disclosure of Asserted Claims and Infringement Contentions, AGIS Software Development LLC v. LG Electronics, Inc. (E.D. Texas), 2:17-cv-515, Nov. 28, 2017 (16 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC v. HTC Corp. (E.D. Texas)*, 2:17-cv-514, Jan. 19, 2018 (23 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, *AGIS Software Development LLC* v. *ZTE Corp et al.* (E.D. Texas), 2:17-cv-517, Jan. 19, 2018 (20 pages).

Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, AGIS Software Development LLC v. ZTE Corp et al. (E.D. Texas), 2:17-cv-517, Aug. 28, 2018 (21 pages).

Page 10

(56) References Cited

OTHER PUBLICATIONS

Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple, Inc. (E.D. Texas)*, Document 32 in Case 2:17-cv-516, Sep. 18, 2017; also Exhibit 1013 in IPR2018-00817 (33 pages).

Plaintiff's First Amended Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (*E.D. Texas*), Document 32 in Case 2:17-cv-513, Aug. 17, 2017 (26 pages).

Plaintiff's First Amended Complaint for Patent Infringement, filed in AGIS Software Development LLC v. ZTE Corp. et al. (E.D. Texas), Document 32 in Case 2:17-cv-517, Oct. 17, 2017 (33 pages). Plaintiff's Original Complaint for Patent Infringement, filed in AGIS Software Development LLC v. HTC Corp. (E.D. Texas), Document 1 in Case 2:17-cv-514, Jun. 21, 2017; also Exhibit 1015 in IPR2018-00817 (24 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC v. Huawei Device USA Inc., et al. (E.D. Texas)*, Document 2 in Case 2:17-cv-513, Jun. 21, 2017; also Exhibit 1008 in IPR2018-01081 (24 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *LG Electronics, Inc.* (E.D. Texas), Document 1 in Case 2:17-cv-515, Jun. 21, 2017 (24 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in *AGIS Software Development LLC* v. *Apple, Inc.* (*E.D. Texas*), Document 1 in Case 2:17-cv-516, Jun. 21, 2017 (26 pages).

Plaintiff's Original Complaint for Patent Infringement, filed in AGIS Software Development LLC v. ZTE Corp. et al. (E.D. Texas), Document 1 in Case 2:17-cv-517, Jun. 21, 2017 (25 pages).

Prior Art Listed in LG Electronics' Invalidity Contentions, AGIS Software Development LLC v. LG Electronics, Inc. et al. (E.D. Texas), Case 2:17-cv-514, Aug. 30, 2018 (9 pages).

Python Documentation Release 2.0 Homepage, Oct. 16, 2000 (1 page); Exhibit 1022 in IPR2018-00817.

Python Library Reference, Section 7.2 Socket (4 pages); Exhibit 1023 in IPR2018-00817.

Shneiderman, B. Designing the User Interface: Strategies for Effective Human-Computer Interaction, Third Edition, 1998 (252 pages); Exhibit 1018 in IPR2018-00821.

Webster's New World Dictionary of Computer Terms, Eighth Edition, 2000 (p. 157); Exhibit 4 to Defendants' Responsive Claim Construction Brief, filed in *AGIS Software Development LLC* v. *Huawei Device USA Inc. et al.* (E.D. Texas), Document 175-5 in Case 2:17-cv-513, Aug. 14, 2018 (5 pages).

ZTE (USA) Inc., and ZTE (TX), Inc.'s Second Election of Prior Art References, AGIS Software Development LLC v. ZTE Corp. et al. (E.D. Texas), 2:17-cv-514, Aug. 29, 2018 (7 pages).

Rebuttal Expert Report of Joseph C. McAlexander III Regarding Validity of U.S. Pat. Nos. 8,213,970; 9,408,055; 9445,251; 9,467,838; and 9,749,829, IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 10, 2019 (400 pages). Decision Denying Institution of Inter Partes Review, IPR2018-01083 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Jan. 10, 2019 (29 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01084 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Jan. 9, 2019 (27 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01087 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Jan. 9, 2019 (28 pages).

Decision: Institution of Inter Partes Review, IPR2018-01471 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,749,829), Feb. 27, 2019 (29 pages).

Order: Conduct of the Proceeding, IPR 2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 3, 2019 (4 pages).

Petitioner's Reply to Patent Owner's Preliminary Response Pursuant to Board's Order (Paper 7), IPR 2018-01471 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,749,829), Jan. 10, 2019 (11 pages).

Patent Owner's Sur-Reply to Petitioner's Reply, IPR 2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Jan. 18, 2019 (9 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Oct. 3, 2018 (34 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00817 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Aug. 10, 2018 (7 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-00818 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Oct. 3, 2018 (33 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00818 (*Apple Inc. v. AGIS Software Development LLC*; U.S. Pat. No. 9,408,055), Aug. 10, 2018 (7 pages).

Patent Owner's Preliminary Response, IPR2018-00819 (*Apple Inc.* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Aug. 9, 2018 (51 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00819 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Aug. 10, 2018 (7 pages).

Petitioner's Reply to Patent Owner's Preliminary Response, IPR2018-00821 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Aug. 10, 2018 (7 pages).

Patent Owner's Preliminary Response, IPR2018-01079 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Aug. 23, 2018 (59 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01079 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 8,213,970), Sep. 19, 2018 (8 pages).

Patent Owner's Preliminary Response, IPR2018-01080 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Sep. 6, 2018 (41 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01080 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Oct. 17, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01081 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Sep. 13, 2018 (43 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01081 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Sep. 19, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01082 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Aug. 23, 2018 (38 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01082 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Sep. 19, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01083 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,445,251), Oct. 11, 2018 (42 pages).

Motorola Solutions, Dispatch Console Accessories, 2018 (3 pages). Patent Owner's Preliminary Response, IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Oct. 11, 2018 (32 pages).

Patent Owner's Preliminary Response, IPR2018-01085 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Aug. 23, 2018 (49 pages).

Patent Owner's Preliminary Response, IPR2018-01086 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Sep. 6, 2018 (53 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01086 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Oct. 17, 2018 (9 pages).

Patent Owner's Preliminary Response, IPR2018-01087 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Oct. 11, 2018 (39 pages).

Patent Owner's Preliminary Response, IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Sep. 12, 2018 (43 pages).

Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01088 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,467,838), Oct. 17, 2018 (9 pages).

Page 11

(56) References Cited

OTHER PUBLICATIONS

Defendants' Disclosure Pursuant to Patent Local Rule 4-1 of Proposed Terms and Claim Elements for Construction, filed in AGIS Software Development LLC v. Huawei Device USA Inc. et al. (E.D. Texas), Apr. 27, 2018 (16 pages).

Petition for Inter Partes Review of U.S. Pat. No. 9,749,829, IPR-01471, filed on behalf of Apple, Inc., Jul. 31, 2018 (85 pages). Petitioner's Reply to Patent Owner Preliminary Response, IPR2018-01084 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Sep. 19, 2018 (9 pages).

Decision Instituting Inter Partes Review, IPR2018-01080 (Google LLC v. AGIS Software Development LLC; U.S. Pat. No. 9,408,055), Dec. 4, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01086 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Dec. 4, 2018 (23 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01088 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Dec. 10, 2018 (30 pages).

Exhibit 3001 in IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), PTAB Conference Call, Dec. 18, 2018 (26 pages).

Joint Statement of Stipulation Regarding Claim Construction, filed in AGIS Software Development LLC v. HTC Corp. et al. (E.D. Texas), Document 91 in Case 2:17-cv-514, Dec. 8, 2018 (5 pages). Claim Construction Order, filed in AGIS Software Development LLC v. HTC Corp. et al. (E.D. Texas), Document 93 in Case 2:17-cv-514, Dec. 18, 2018 (2 pages).

Decision: Institution of Inter Partes Review, IPR2018-01079 (*Google LLC v. AGIS Software Development LLC*; U.S. Pat. No. 8,213,970), Nov. 20, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01081 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Nov. 20, 2018 (38 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01082 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,445,251), Nov. 20, 2018 (39 pages).

Decision Denying Institution of Inter Partes Review, IPR2018-01085 (*Google LLC* v. *AGIS Software Development LLC*; U.S. Pat. No. 9,467,838), Nov. 19, 2018 (22 pages).

Patent Owner's Preliminary Response, IPR2018-01471 (Apple Inc. v. AGIS Software Development LLC; U.S. Pat. No. 9,749,829), Nov. 28, 2018 (24 pages).

* cited by examiner

Jul. 2, 2019

Sheet 1 of 7

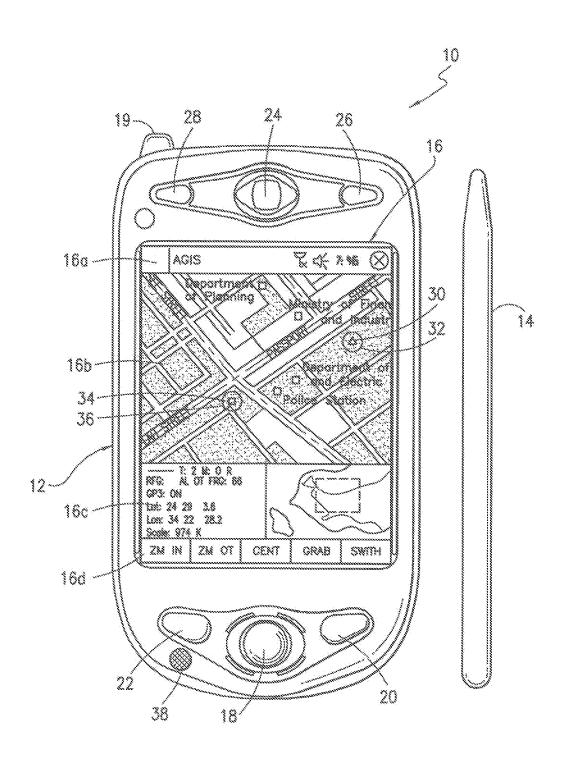
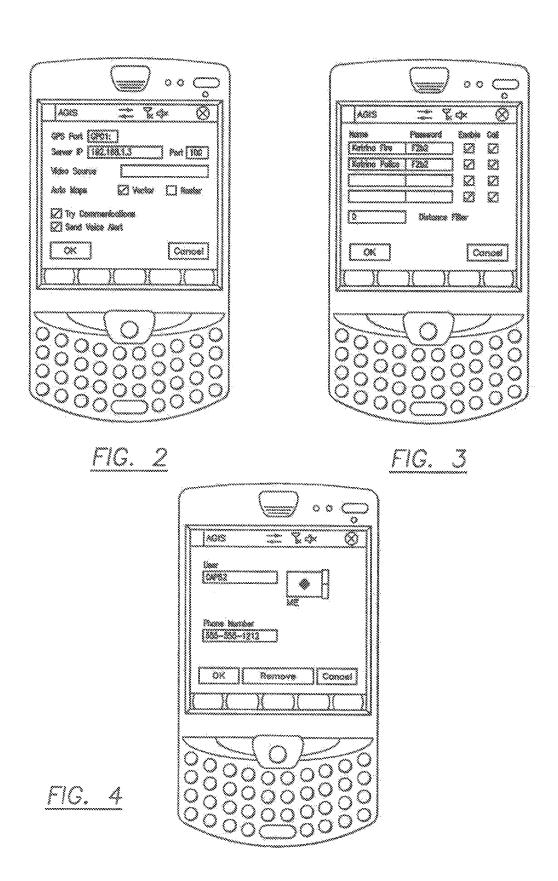


FIG. 1

Jul. 2, 2019

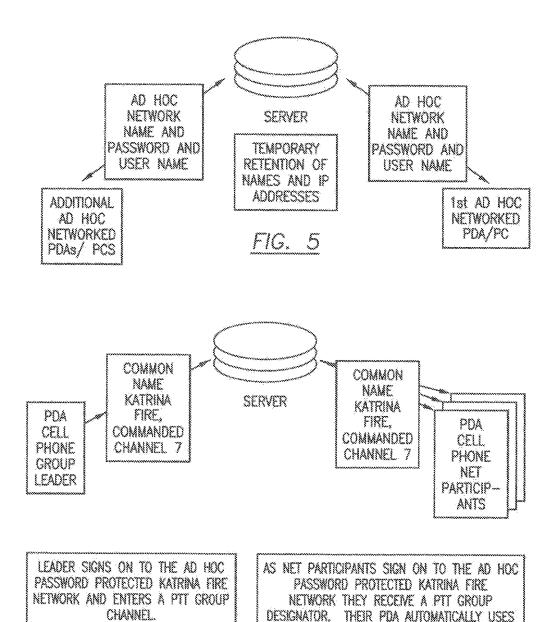
Sheet 2 of 7



Jul. 2, 2019

Sheet 3 of 7

US 10,341,838 B2



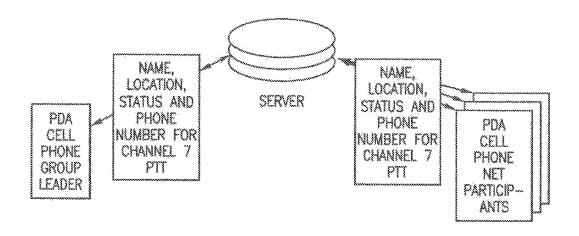
THE PIT DATA TO SHIFT TO THE COMMANDED VOICE CHANNEL.

FIG. 6

Jul. 2, 2019

Sheet 4 of 7

US 10,341,838 B2



LEADER RECEIVES THE PTT NAME
LOCATION, STATUS AND PPT
CHANNEL 7 PHONE NUMBER AS EACH
AD HOC PASSWORD PROTECTED
KATRINA FIRE NETWORK UNIT REPORTS

AS NET PARTICIPANTS REPORT IN THE AD HOC PASSWORD PROTECTED KATRINA FIRE NETWORK. THEY TRANSMIT THIER NAME, LOCATION, STATUS AND PTT PHONE NUMBER. ALL ON THE KATRINA FIRE NETWORK RECEIVE ALL OTHERS' DATA

FIG. 7

U.S. Patent Jul. 2, 2019

Sheet 5 of 7

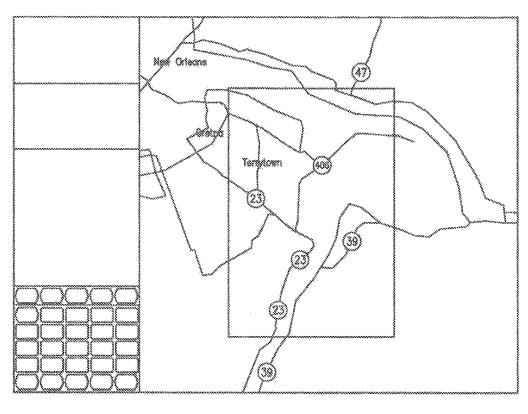
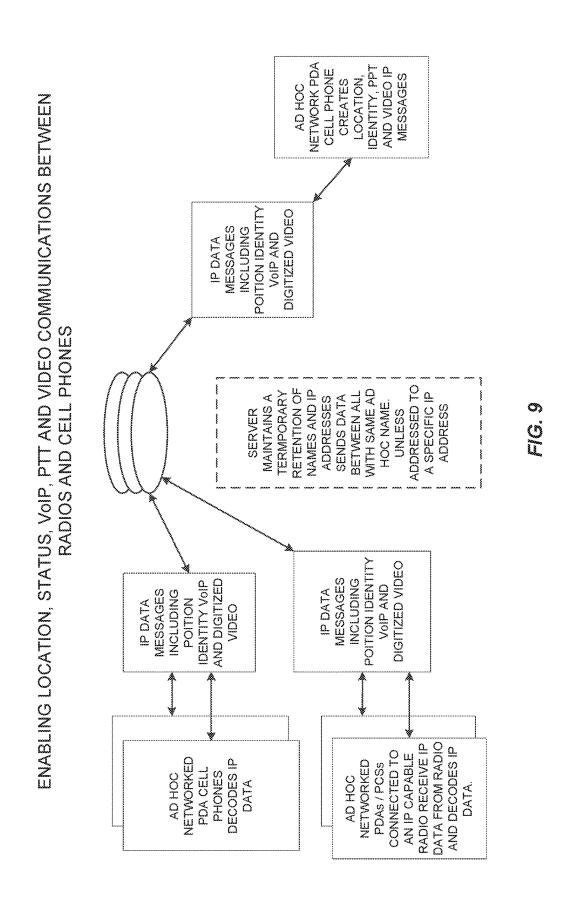


FIG. 8

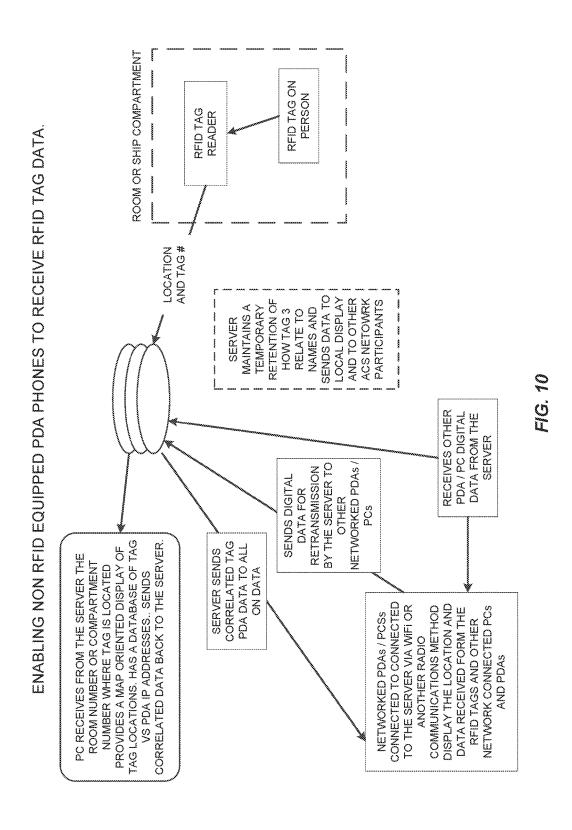
Jul. 2, 2019

Sheet 6 of 7



Jul. 2, 2019

Sheet 7 of 7



1

METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of co-pending U.S. patent application Ser. No. 15/722,660, which is a continuation of U.S. patent application Ser. No. 15/469,469, on Mar. 10 24, 2017, which is a continuation of U.S. patent application Ser. No. 15/287,638, on Oct. 6, 2016, now U.S. Pat. No. 9,706,381 issued on Jul. 11, 2017, which is a continuation of U.S. patent application Ser. No. 14/529,978, filed on Oct. 31, 2014, now U.S. Pat. No. 9,467,838 issued Oct. 11, 2016 15 which is a continuation-in-part of U.S. patent application Ser. No. 14/027,410, filed on Sep. 16, 2013, now U.S. Pat. No. 8,880,042 issued Nov. 4, 2014, which is a continuation of U.S. patent application Ser. No. 13/751,453, filed Jan. 28, 2013, now U.S. Pat. No. 8,538,393 issued Sep. 17, 2013, 20 which is a continuation-in-part of U.S. patent application Ser. No. 12/761,533 filed on Apr. 16, 2010, now U.S. Pat. No. 8,364,129 issued Jan. 29, 2013, which is a continuationin-part of U.S. patent application Ser. No. 11/615,472 filed on Dec. 22, 2006, now U.S. Pat. No. 8,126,441 issued on 25 Feb. 28, 2012, which is a continuation-in-part of U.S. patent application Ser. No. 11/308,648 filed Apr. 17, 2006, now U.S. Pat. No. 7.630,724 issued on Dec. 8, 2009, which is a continuation-in-part of U.S. patent application Ser. No. 10/711,490, filed on Sep. 21, 2004, now U.S. Pat. No. 30 7,031,728 issued on Apr. 18, 2006. All of the proceeding preceding applications are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

A communications method and system using a plurality of cellular phones each having an integrated Personal Digital 40 Assistant (PDA) and Global Positioning System (GPS) receiver for the management of two or more people through the use of a communications network. The method and system provide each user with an integrated handheld cellular/PDA/GPS/phone that has Advanced Communication 45 Software application programs (hereinafter referred to as ACS) and databases used in conjunction with a remote Server that enable a user to quickly establish a communication network of cell phone participants having a common temporary ad hoc network using mobile wireless communication devices.

The invention includes a method and communication system to quickly set up and provide ad hoc, password protected, digital and voice networks to allow a group of people to be able to set up a network easily and rapidly, 55 using cellular or other communications.

Description of Related Art

The purpose of a communications system is to transmit 60 digital messages from a source, located at one point, to user destination(s), located at other point(s) some distance away. A communications system is generally comprised of three basic elements: transmitter, information channel and receiver. One form of communication in recent years is 65 cellular phone telephony. A network of cellular communication systems set up around an area such as the United

2

States allows multiple users to talk to each other, either on individual calls or on group calls. Some cellular phone services enable a cellular phone to engage in conference calls with a small number of users. Furthermore, cellular conference calls can be established through 800 number services. Cellular telephony also now includes systems that include GPS navigation that utilizes satellite navigation. These devices thus unite cellular phone technology with navigation information, computer information transmission and receipt of data.

The method and operation of communication devices used herein are described in U.S. Pat. No. 7,031,728 which is hereby incorporated by reference and U.S. Pat. No. 7,630,724.

Military, first responder, and other public and private emergency groups need to be able to set up ad hoc digital and voice networks easily and rapidly. These private networks may be temporary or longer lasting in nature. The users need to be able to rapidly coordinate their activities eliminating the need for pre-entry of data into a web and or identifying others by name, phone numbers or email addresses so that all intended participants that enter the agreed ad hoc network name and password are both digitally and voice interconnected. When a user or users leave the network, no data concerning the network participants need be retained.

Coordinating different organizations at the scene of a disaster presents several problems as there are voice and digital data (text messages) communications that need to be constantly occurring up and down the chain of command. As an example, communications are required from a police chief to a police captain to a police lieutenant to a police sergeant to a policeman and then back up the same chain of command. Digital data exchange of GPS data or other means provides the location component of the units. Digital chat, text messages, white boards and photo video exchange provide extensive collaboration. However, during a disaster, other first responders such as fire departments must become engaged. While the fire department users may have voice and digital data (text messages) communications up and down their chain of command, these individuals do not have the ability to cross communicate necessarily with police units without a substantial degree of immediate coordination. The method and system in accordance with the present invention described herein discloses how digital communications along with Personal Computer (PC) and PDA devices can be used to quickly establish user specific password protected private ad hoc voice and data networks to enable both data and voice communications up and down their chain of command and simultaneously with different, not pre-known, organizations responding to a disaster. The invention defines a method of accomplishing this by providing all personnel that need to communicate with each other with a PC or PDA which are interconnected to a Server

SUMMARY OF THE INVENTION

Applicant's communication system and method described herein is embodied in the Advanced Communication Software (ACS) application programs developed by applicant and installed in the integrated PDA/GPS cell phones used herein and remote Servers.

A plurality of Internet Protocol (IP) capable PDA/GPS devices each having ACS application programs and databases provides a communication network in conjunction with a remote Server that provides the ability to: a) establish

3 an ad hoc network of devices so that the devices can either broadcast to a group or selectively transmit to each of the other; each PDA/GPS phone starts by requesting access to the Server and identifying a mutually agreed to network name and password and once granted, reports its GPS 5 position and status; the Server then routes the data to all signed on network participants so that each of the devices exchange location, status and other information; (b) force the received information to the recipient's display and enable the recipient to acquire additional information by 10 touching the display screen at a remote phone's location on the PDA display; (c) make calls to or send data to remote phones by touching their display symbols and selecting the appropriate soft switch; (d) layer a sufficient number of soft switches or buttons on the PDA display to perform the above 1 functions without overlaying the map; and (e) allow a polling mode in each cell phone that permits a user to contact other cell phone users that have a common interest or relationship with a password and identifier for commu-

A communication Server acts as a forwarder for IP communications between any combination of cell phone/ PDA users and/or PC based users. Network participant location, identity and status messages are sent to the Server 25 by each user. Network participant entered tracks are also sent to the Server. Because this network participant location and track data is of interest to all the network participants, the Server forwards the data received from one participant to all other participants, causing their displays automatically, 30 without any operator action, to display the received information, thus providing the information necessary for all network participants to know the identity, location and status of all other network participants.

nication and to establish quickly a temporary ad hoc network 20

especially in an emergency.

The Server also acts as a forwarder of data addressed from 35 one participant to one or more addressed participants, thus permitting the transmission of free text, preformatted messages, photographs, video, Email and Uniform Resource Locator (URL) data from one network participant to other selected network participants.

The above functions can also be accomplished using peer to peer WiFi, WiMax or other peer to peer communications. However, for use with cellular communications and to assure the level of security that cell phone companies require, a centralized static IP routable Server is used.

The IP Server also fills another role of being a database from which data can be requested by network participants (i.e. maps, satellite images, and the like) or can be pushed to network participants (i.e. symbology and soft switch changes, and the like). The Server is used to establish an ad 50 drawings. hoc network within certain groups using an ad hoc event name and password.

This invention provides a method and a system establishing an ad hoc password protected digital and voice network that can be temporarily set up or longer lasting in nature. The 55 GPS having a touch screen. invention described herein allows users to rapidly coordinate their activities without having to pre-enter data into a web or identify others by name, E mail addresses or phone numbers. Essentially the users that establish the ad hoc and password protected digital and voice networks are required to enter the 60 Server's IP address and an ad hoc event name and a password. In the case of military and first responders, the name of the user's unit may also be used. This action causes the specific PDA or PC of the user to commence reporting directly to the Server's IP address. Once the Server receives 65 the initial IP message from the user's PDA or PC, the server can commence to exchange data with the user's PDA or PC.

The initial IP message may also contain additional data such as a license number and, if desired, a phone number manually entered or automatically acquired by the ACS. The IP address of the PDA and PC unit sending the initial IP message is stored by the Server. The Server then responds with a message notifying the user that his PC/PDA is connected to the Server. The user PDA/PC then reports its GPS location and other status information directly to the Server. This information is retained by the Server even when there are no other devices initially communicating with the Server. When the other user's devices sign on to the Server with the same ad hoc event name and password, the Server software then recognizes all the users and stores their IP addresses in the Server. Thus the Server has all the users IP addresses stored and can pass location and status information among the ad hoc network participants even though the network participants have not entered other network participants' names, phone numbers or email addresses. Thus one of the purposes of the invention is to allow an ad hoc network to be formed on a temporary basis in a rapid manner.

When using the PTT feature, the ACS can enable the network participant to: 1. PTT with all that are in the ad hoc digital network, or 2. PTT with select specific network participants, by touching their symbols) and then selecting PTT soft switch or 3. Specify a group of the network participants by assigning their symbols or unit names to a list of network participants and then associating the list with a soft switch whose function is to enable the operator to have PTT communications with all in the list.

Since only one person is transmitting on a PTT voice network at any given time, the receiving network participant's ACS can relate the PTT IP address to the IP address of the unit transmitting his identification on the digital ad hoc network. This information can then be used by the other PTT networked participant's ACS to: 1. flash the transmitting unit's name on their PDA/PC screens or 2. if a photograph has been attached to the ad hoc digital network symbol of the PTT transmitting person, to flash that photograph on the receiving unit's PDA/PC display.

It is an object of this invention to enable each participant in the communication network to join other ad hoc network participants to form an ad hoc digital and voice network with other cell phone users rapidly for coordinating member activities.

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompanying

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a front plan view of a cellular phone/PDA/

FIG. 2 shows the screen IP address entry menu.

FIG. 3 shows ad hoc net names and password screen entry

FIG. 4 shows a screen entry identifying user.

FIG. 5 shows a flow chart of the network as users sign on to the network.

FIG. 6 shows a flow chart that depicts how a group commander can command networked PDAs/PCS and radios to load a Push To Talk (PTT) channel.

FIG. 7 shows a flow chart that depicts how networked radio units respond to receipt of the Push-to-Talk (PTT) Commanded Channel.

FIG. 8 shows a PDA screen geographical display that represents the area covered by the network.

FIG. 9 shows a diagram that enables determining location, status, ViOP, PTT, and video communication between adios and cell phones.

FIG. 10 shows a diagram that describes enabling non RFID equipped PDA phones to receive RFID tag data.

PREFERRED EMBODIMENT OF THE INVENTION

A method and communication system that joins a communications network of participants using handheld cell phones having integrated PDA and GPS circuitry with ACS application programs that allow a participant having an ACS 15 equipped cell phone to provide an ad hoc and password protected digital and voice network.

A communication Server acts as a forwarder for IP communications between any combination of cell phone/PDA users and/or PC based user. Network participant location, identity and status messages are sent to the Server by each user. Network participant entered tracks are also sent to the Server. Because this data is of interest to all the network participants, the Server forwards the data received from one participant to all other participants, thus providing the information necessary for all network participants to know the identity, location and status of all other network participants.

The Server allows the set up of the ad hoc network with an ad hoc event name and a password.

The Server also acts as a forwarder of data addressed from 30 one participant to one or more addressed participants, thus permitting the transmission of free text, preformatted messages, photographs, video, email and URL data from one network participant to other selected network participants.

Referring now to the drawings and, in particular, to FIG. 35 1, a small handheld cellular phone 10 is shown that includes a PDA and a GPS communications device integrated in housing 12 that includes an on/off power switch 19, a microphone 38, and a Liquid Crystal Display (LCD) display 16 that is also a touch screen system. The small area 16a is 40 the navigation bar that depicts the telephone, GPS and other status data and the active software. Each cell phone includes a Central Processing Unit (CPU) and databases that store information useful in the communication network. The CPU also includes a symbol generator for creating touch screen 45 display symbols discussed herein. With the touch screen 16, the screen symbols are entered through GPS inputs or by the operator using a stylus 14 (or operator finger) by manipulatively directing the stylus 14 to literally touch display 16. The soft switches 16d displayed on the display 16 are 50 likewise activated by using a stylus 14 and physically and manipulatively directing the stylus to literally touch display 16. The display x, y coordinates of the touched point are known by a CPU in the PDA section of the communication system in housing 12 that can coordinate various informa- 55 tion contained in the PDA relative to the x, y coordinate position on the display 16. Inside housing 12 is contained the conventional cellular phone elements including a modem, a CPU for use with a PDA and associated circuitry connected to speaker 24 and microphone 38. A GPS navigational 60 receiver that receives signals from satellites that can determine the latitude and longitude of the cellular phone housing 12 can be internal or external to the housing 12. Conventional PDA/cellular phones are currently on sale and sold as a unit (or with an external connected GPS) that can be used 65 for cellular telephone calls and sending cellular Short Message Service (SMS) and Transmission Control Protocol

6

(TCP) TCP/IP or other messages using the PDA's display 16 and computer CPU. The GPS system including a receiver in housing 12 is capable of determining the latitude and longitude and through SMS, TCP/IP, WiFi or other digital messaging software, to also transmit this latitude and longitude information of housing 12 to other cellular phones in the communication network via cellular communications, WiFi or radio. The device 10 includes a pair of cellular phone hardware activating buttons 20 to turn the cellular phone on and 22 to turn the cellular phone off. Navigation pad actuator 18 is similar to a joy or force stick in that the actuator 18 manually provides movement commands that can be used by the RDA's software to move a cursor on display 16. Switches 26 and 28 are designed to quickly select an operator specified network software program. Speaker 24 and microphone 38 are used for audio messages. Switch 19 at the top left of device 10 is the power on and power off switch for the entire device.

The heart of the invention lies in the applicant's ACS application programs provided in the device. The ACS programs are activated by clicking on an icon on the display to turn the ACS programs on or off. Mounted within housing 12 as part of the PDA is the display 16 and the CPU. The internal CPU includes databases and software application programs that provide for a geographical map and georeferenced entities that are shown as display portion 16b that includes as part of the display various areas of interest in the particular local map section.

When looking at display 16, the software switches (soft switches) which appear at the very bottom of the display 16d are used to control by touch many of the software driven functions of the cellular phone and PDA. The soft switches are activated through the operator's use of the navigation pad 18, or a small track ball, force stick or similar hardware display cursor pointing device. Alternatively, the operator may choose to activate the software switches by touching the screen with a stylus 14 (or finger) at the switches' 16d locations. When some of the software switches are activated, different software switches appear. The bar display 16d shows the software switches "ZM IN (zoom in)," "ZM OT (zoom out)," "CENT (center)" and "GRAB (pan/grab)" at the bottom of the screen. These software switches enable the operator to perform these functions. The "SWITH (switch)" software switch at the lower right causes a matrix of layered software switches (soft switches) to appear above the bottom row of switches. Through use of the software switches, the operator can also manipulate the geographical map 16b or chart display. When looking at FIG. 1, display symbols depicting permanent geographical locations and buildings are shown. For example, the police station is shown and, when the symbol is touched by the stylus or finger, the latitude and longitude of the symbol's location, as shown in display section 16c, is displayed at the bottom left of the screen. The bottom right side of display 16c is a multifunction inset area that can contain a variety of information including: a) a list of the communication link participants; b) a list of received messages; c) a map, aerial photograph or satellite image with an indication of the zoom and offset location of the main map display, which is indicated by a square that depicts the area actually displayed in the main geographical screen 16b; d) applicable status information; and e) a list of the communication net participants. Each participant user would have a device 10 shown in FIG. 1.

Also shown on the display screen 16, specifically the geographical display 16b, is a pair of different looking symbols 30 and 34, a small triangle and a small square, which are not labeled. These symbols 30 and 34 can

represent communication net participants having cellular phones in the displayed geographical area that are part of the overall cellular phone communications net, each participant having the same device 10 used. The latitude and longitude of symbol 30 is associated within a database with a specific 5 cell phone number and, if available, its IP address and email address. The screen display 16b, which is a touch screen, provides x and y coordinates of the screen 16b to the CPU's software from a map in a geographical database. The software has an algorithm that relates the x and y coordinates to 10 latitude and longitude and can access a communications net participant's symbol or a fixed or movable entity's symbol as being the one closest to that point.

In order to initiate a telephone call to the cellular phone user (communication net participant) represented by symbol 15 (triangle) 30 at a specific latitude and longitude display on chart 16b, the operator touches the triangle 30 symbol with the stylus 14. The user then touches a "call" software switch from a matrix of displayed soft switches that would overlay the display area 16c. Immediately, the cellular phone will 20 initiate a cellular telephone call to the cellular phone user at the geographical location shown that represents symbol 30. A second cellular phone user (communication net participant) is represented by symbol 34 which is a small square (but could be any shape or icon) to represent an individual 25 cellular phone device in the display area. The ring 32 around symbol 30 indicates that the symbol 30 has been touched and that a telephone call can be initiated by touching the soft switch that says "call." When this is done, the telephone call is initiated. Other types of symbolic elements on the display 30 16 can indicate that a cellular phone call is in effect. Additionally, the operator can touch both symbol 34 and symbol 30 and can activate a conference call between the two cellular phones and users represented by symbols 30 and 34. Again, a symbolic ring around symbol 34 indicates 35 that a call has been initiated.

Equally important, a user can call the police station, or any other specific geographical facility displayed on the map including: buildings, locations of people, vehicles, facilities, restaurants, or the like, whose cellular phone numbers and, 40 if available, Email addresses, IP addresses and their URLs (previously stored in the database) by touching a specific facility location on the map display using the stylus 14 and then touching the cellular phone call switch. As an example, the operator can touch and point to call a restaurant using a 45 soft switch by touching the restaurant location with a stylus and then touching the call soft switch. The cellular phone will then call the restaurant. Thus, using the present invention, each participant can touch and point to call to one or more other net participants symbolically displayed on the 50 PDA/cellular phone device system by turning on the cell map, each of whom has a device as shown in FIG. 1, and can also point to call facilities that had been previously stored in the phone's database. Furthermore, this symbol hooking and soft switch technique can be used to go to a fixed facility's website or to automatically enter the fixed facility's email 55 address in an email.

Each cellular phone/PDA/GPS user device is identified on the map display of the other network participant user's phone devices by a display symbol that is generated on each user phone display to indicate each user's own location and 60 identity. Each symbol is placed at the correct geographical location on the user display and is correlated with the map on the display and is transmitted and automatically displayed on the other network participant's PC and PDA devices. The operator of each cellular phone/PDA/GPS device may also enter one or more other fixed entities (buildings, facilities, restaurants, police stations, etc.) and

geo-referenced events such as fires, accidents, etc., into its database. This information can be likewise transmitted to all the other participants on the communications net and automatically displayed. The map, fixed entities, events and cellular phone/PDA/GPS device communication net participants' latitude and longitude information is related to the "x" and "y" location on the touch screen display map by a mathematical correlation algorithm.

8

When the cellular phone/PDA/GPS device user uses a stylus or finger to touch one or more of the symbols or a location displayed on the cellular phone map display, the system's software causes the status and latitude and longitude information concerning that symbol or location to be displayed. In order to hook a symbol or "track" such as another net participant which represents an entity on the geo-referenced map display, or a fixed geographical entity such as a restaurant, police station or a new entity observed by a cell phone user which is discussed below, the operator touches at or near the location of a geo-referenced symbol appearing on the cellular phone/PDA display that represents a specific track or specific participant or other entity. The hook application software determines that the stylus (or finger) is pointed close to or at the location of the symbol and puts a circle, square or other indication around the symbol indicating that amplification information concerning the symbol is to be displayed. The operator can hook entered tracks or his own track symbol and add data or change data associated with the indicated symbol. The hook application code then sends a message to the database application code to store the facility or entity's updated data. The display application code retrieves the primary data and amplification data concerning the symbol or entity from the database and displays the information at the correct screen location. The operator can then read the amplification data that relates to that specific symbol at the specific location. The cell phone operator can also select soft switches on the touch screen display to change the primary data and amplification data. Furthermore, the operator can use a similar method of hooking and selecting to activate particular soft switches to take other actions which could include: making cellular phone calls, conference calls, 800 number calls; sending a free text message, operator selected preformatted messages, photographs or videos to the hooked symbol; or to drop an entered symbol.

Each known net participant has a cellular phone number, IP address and, if available, Email address that is stored in each participant's device database.

To use the communication system, a user starts the phone power and selecting the cell phone and network software which causes: a) the cellular phone to be activated (if it has not already been activated); b) the GPS interface receiver to be established; c) a map of the geographic area where the operator is located and operator's own unit symbol to appear at the correct latitude and longitude on the map on the display; d) the locations of fixed facilities such as restaurants, hotels, fire departments, police stations, and military barracks, that are part of the database to appear as symbols on the map; e) the device selected item read out area which provides amplification information for the communications net participants or the entity that has been hooked (on the display screen) to appear on the display; f) an insert area that contains various data including: the list of net participants, a list of messages to be read, an indication of what portion of the map is being displayed in major map area and other information to appear on the display; and g)

9 a row of primary software created "soft switches" that are always present on the display to appear.

For point to call network units and fixed facilities, the application code detects the x, y display screen location of the symbol that is designated by the user's stylus and translates the x, y coordinates to latitude and longitude and then: (1) searches the database to find the symbol at that location, (2) places a "hook" indicator (a circle, square or other shape) around the symbol, (3) displays any amplifying data and (4) obtains the symbol's associated phone number (or, for Voice over IP (VoIP) an IP address) from the database. Upon receiving a "call" designation from the soft switch, the operator's device's ACS causes the appropriate phone number or IP address to be called. Upon receiving an indication that the phone number is being called, the application code places a box around the symbol (color, dashed or the like). When the call is connected, the box changes to indicate that the connection is made. When the other party hangs up, the box disappears.

As each of the cell phone participants reports its identity, location and status to the other participants' devices, the received data is automatically geo-referenced and filed in their databases that are accessible by identity and by location. This data is then displayed on each cell phone display. 25 When a request for data is received by touching the display screen, a location search is made by the ACS and a symbol modifier (circle, square, etc.) is generated around the symbol closest to the x, y position of the stylus. When the application code receives a soft switch command to place a phone 30 call or send data, the software uses the phone number (or IP address) associated with the unit to place the call or to send data.

If a cell phone device receives a digital message that a call is being received, the receiving cell phone's ACS application code places a box or similar object around the transmitter symbol indicating who the call is from. When the call is answered, the application software changes the visual characteristics of the box. In a similar manner, when a phone receives a digital text message, photograph or video, a box 40 appears around the transmitter's symbol indicating the transmitter of the message. The point to call network devices are network participants and each one has a PC/PDA device with the same software for use as a total participant network. Other situations for calling facilities that are not network 45 participants are also described below.

Thus, a user is capable of initiating a cellular phone call by touch only and initiating conference calls by touching the geo-referenced map symbols. Furthermore, by using a similar symbol touching technique, a cellular phone can send 50 user selected messages to cause a remote cellular phone to display and optionally announce emergency and other messages and to optionally elicit a response from the remote cellular phone.

All of the network participants have the same communication cell phone/PDA/GPS device described herein. The method and system include the ability of a specific user to provide polling in which other cellular phones, using SMS, internet or WiFi, report periodically based on criteria such as time, speed, distance traveled, or a combination of time, speed and distance traveled. A user can manually poll any or all other cell phone devices that are used by all of the participants in the communication network having the same devices. The receiving cellular phone application code responds to the polling command with the receiving cellular 65 phone's location and status which could include battery level, GPS status, signal strength and entered track data.

10

Optionally, the phone operators can set their phones to report automatically, based on time or distance traveled intervals or another criterion.

The soft switch application software causes a visual display of a matrix such as five across by six up (or another matrix) in which switch names are placed on the cellular/PDA display. The soft switch network application software knows the touch screen location of each of the switches in the matrix and the software routines that will be activated upon touching the switch.

The bottom row of soft switches displayed on the touch screen retrains visually fixed. These switches concern the functions that are the most often used. One of the switches causes a matrix of other soft switches to appear above the visually fixed soft switches. These switches are function soft switches, the activation of any one of which causes a different matrix of soft switches to appear, which are known as the action soft switches. When the action soft switches appear, the function soft switch, which caused the action soft switches to appear, itself appears as a label in the lower left (or some other standard location) indicating to the operator the function soft switch that has been selected. When the operator selects an action soft switch, the appropriate application software to accomplish the action is activated.

Upon receiving a soft switch activation message, the ACS accesses the appropriate task execution software which accomplishes the required tasks including: entry of track data, entry of track amplification data, transmission of alpha/numeric messages, photographs, videos, display of messages to be read, selection of map types, placing voice calls, placing conference calls and 800 conference calls, presenting different potential operator selections, control of the display actions, polling network participants, establishing nets of participants (groups) so that communications with all in the group can be accomplished with a single soft switch action, and dropping a previously entered track. By providing a matrix and layers of soft switches which are easily manipulated by a stylus, each cell phone device in the communication network is extremely efficient in accessing and coordinating the appropriate application program for the device to perform.

Users such as emergency groups, police, fire personal, military, first responders and other groups need to be able to set up ad hoc digital and voice networks easily and rapidly. The users need to be able to rapidly coordinate activities eliminating the need for pre-entry data as discussed above. Users are required to enter the Servers' IP address and an ad hoc event name, a password and, for first responders and military, the names of their units. This will normally be controlled by the PDA/PC user's position in the chain of command. For others it can be any selected name and, if desired, password.

Referring now to FIG. 2, the PDA/PC screen displays an IP address entry menu. The user inserts the Server's IP address. Thus, as shown in FIG. 2, the user has entered in the cell phone/PDA the Server IP address and port number along with the GPS port listing and other information. Once that information is entered, referring now to FIG. 3, the user now enters the ad hoc event network name which is shown in this example as "Katrina" along with a password. Referring now to FIG. 4, the user then enters the user name or a unit name. FIG. 4 shows the entered user name and a phone number. The phone number may be automatically entered by the ACS or manually entered. The phone number is not required unless using the phone system (not VoIP) to make calls. These are the initial user steps required to establish an ad hoc network or to join onto an existing ad hoc network.

11

Referring now to FIG. 5, these actions cause the user cell phone/PDA or PC to commence reporting to the Server. Upon receipt of the initial message from the user's PDA/PC, which may also contain additional data such as a license number, the Server stores the IP address of the user's PDA/PC unit and responds with a message notifying the user that he or she is connected to the Server. The PDA/PC then automatically commences to report its GPS derived location and other status information to the Server. Since there are no other devices initially communicating with the Server, the Server just retains the information. When other devices sign on to the Server with the same ad hoc event name and password, the Server's software recognizes this and stores their IP addresses. Since the Server has all parties' IP addresses, the server is able to pass location and status information automatically between the ad hoc network participants. This can occur even though the ad hoc network participants have not entered other network participants names, telephone numbers or Email addresses and do not 20 have the other network participants' IP addresses, phone numbers or Email addresses. Once this connection is made, data types that are entered on one display that is of interest to all is sent from the server to all others in the network. Such data types include track location and track amplification 25 data, geo-referenced white boards, and chat.

When the PDA/PC user wants to address particular data (a text message, photograph, video clip, voice recording, white board, or chat), the user enters the name of the other ad hoc network participant by either entering a name or 30 touching his or her symbol. Since the Server knows the IP address of the name or symbol, the Server forwards the data appropriately to that network participant. When a unit signs off the network, it transmits a message to the Server which then transmits a message to all the network participants to 35 drop the unit and its associated tracks. If a unit loses communications for a variable time period, the unit's data is flushed from each of the recipient network participants systems according to a variable time period. After a separate variable time period, the Server also flushes the non-reporting units data.

As can be seen in FIG. **6**, provisions have been made for the PDA/PC to report on multiple networks thus allowing both digital communications up and down the chain of command and with adjacent units that have entered a 45 common ad hoc network name and password.

Typically military and First Responder units use Push-to-Talk (PTT) communications. Units in an organization's chain of command typically have instituted a method to establish voice communications between themselves for 50 they know each other's cellular phone numbers, PTT cellular group identifiers and radio frequencies or channel numbers. However, in a disaster there are many different units (fire, police, EMS, Military, and the like) involved all of whom need to establish voice communications between 55 each other. The issue then becomes how to coordinate these PTT voice communications with the ad hoc digital communications so that all on the digital data network automatically also have PTT voice communications with each other. If the PCs and PDAs in a group have manually entered their phone 60 numbers, or the ACS has automatically entered their phone numbers, and sent their phone numbers as part of their initial message to the Server, this data is then sent by the Server to all others in the network. Upon receiving the phone number data, the recipients' ACS loads the cell phones numbers into 65 their databases creating a phone number PTT group common with the digital IP network group.

12

The issue when using radios, however, is different. PTT radio coordination between multiple people is achieved by using a common radio frequency "Channel".

Furthermore, it is desirable to enable it so that, when new network participants join the digital network, they are automatically included in the voice network and, when they leave the digital network, they are automatically dropped from the digital network.

As can be seen in FIG. **6** and FIG. **7**, a network participant currently can establish a new ad hoc digital network or join an existing ad hoc digital network by entering the ad hoc network name and password into his PDA/PC. To enable voice coordination with all that are a part of the ad hoc digital network, the user then enters (if user is authorized to do so) a Channel or Group number that the user is commanding all in the ad hoc network to establish as their PTT voice net. As seen in FIG. **6**, the operator has commanded all to shift to Radio Channel or to a specific PTT cellular or radio channel; i.e. Group 7.

This action causes the PTT Channel, or PTT Group 7, to be sent to the other PDA/PC users in the ad hoc password protected network through the Server.

As shown in FIG. 6 and FIG. 7, the Group leader enters the Katrina Fire ad hoc network and issues a command which is sent to the Server to cause the PDAs/PCs that are in the Katrina Fire Group to automatically shift their Radio or cellular device to Channel 7. Each PDA cell phone can connect to the user's Radio for control with a USB cable, or WiFi, Bluetooth, or Near Field Communications (NFC) signals or other communications that are contained in the PDA/PC cellular device. This enables the Radios to shift to a common channel. This action is received by the Server which then sends the "Shift to Channel 7 Command" to all network participants in the Katrina Fire ad hoc network. When the PDA/PC/Tablet Katrina Fire network participant's software receives the command to shift its Radio Channel PPT to Group 7, this action causes the PDA's ACS to establish a new Channel 7 group (or to override an old Channel 7 group) that consists of all on the digital ad hoc network. The PC and PDAs then send their radios' digital interfaces messages to shift to Channel 7 or to the frequency associated with Channel 7. The digitally networked PC's and PDA's ACS devices then send a message to all on the digital network that they have shifted to Channel 7 (or to the appropriate frequency) and also further send the Group Leader's identifier and Command to shift to Channel 7 so that the ACS' devices associated with new users joining the digital network will automatically digitally set their radios to Channel 7 or the appropriate frequency.

As shown in FIG. 7, each time one of the network participants reports to the Katrina Fire network its Name, Position and Status, it now also reports that it is in PTT Channel 7 enabling the PTT group to grows in size until it encompasses all in the ad hoc password protected digital network. When units drop out of the Common Interest Network or lose communications because they are no longer active or they are out of range, their PTT Channel data is likewise dropped as they dropped out of the digital because their reports have not been received for a set, but adjustable, time period. If a unit rejoins the network, their PTT Name and Phone number is again automatically added to the Katrina Fire Interest Group as they are accepted by the Server into the Katrina Fire Interest digital Group.

When using the PTT feature, the ACS can enable the network participant to: 1. PTT with all that are in the ad hoc digital network, or 2. PTT with select specific network participants, by touching their symbol(s) and then selecting

PTT soft switch or 3. Specify a group of the network participants by assigning their symbol or unit name to a list of network participants and then associating the list with a soft switch whose function is to enable the operator to have

PTT communications with all in the list.

13

Since only one person is transmitting on a PTT voice network at any given time, the receiving network participant's ACS can relate the PTT IP address to the IP address of the unit transmitting his identification on the digital ad hoc network. This information can then be used by the other PTT networked participant's ACS to: 1. flash the transmitting unit's name on their PDA/PC screens or 2. if a photograph has been attached to the ad hoc digital network symbol of the PTT transmitting person, to flash that photograph on the receiving unit's PDA/PC display.

Referring now to FIG. **8**, for some Emergency events, and in particular military operations, it is desirable to further define ad hoc networks so that the networks encompass only a certain geographical area defined by boundary lines on a 20 map. To accomplish this, an enhancement to the ad hoc digital and voice PTT password protected network is provided. As an example, once the Katrina. Fire digital and PTT network is established, the ad hoc network can be further refined by the Group Leader defining a map area that limits 25 the participating group to only those users within a geographically defined area by the Group Leader, creating on his PC/PDA display a box that defines a geographic area on a map.

As shown in FIG. 8, the Latitude/Longitude points that define the rectangle of the boundary area are sent from the Group Leader's device to the Server which relays the data to the other participating unit PC/PDA devices in the Katrina Fire network. When the participating unit devices receive the Latitude/Longitude points, their software computes whether their PC/PDA unit is inside or outside a boundary area. If the users are inside the defined area, the users retain but disregard the Latitude/Longitude data and continue to report on the digital password protected network and to use 40 the commanded PTT channel/frequency. However, if the users are outside the area, the users send a "drop me message" to the Katrina Fire PDA/PC digital network Server and cease reporting on the network. When Katrina Fire network PDA/PC user units leave the defined area or lose 45 communications for a specified, but adjustable, time period, the Server drops the unit from the network and informs all network users that the unit is dropped from the digital network and from voice PTT Channel 7 which causes all others on the network to drop them. When Katrina Fire 50 networked PDA/PC user units re-enter the area, the unit's ACS detects the fact and commences reporting as it receives reports from other network participants it will receive the current PTT channel or frequency.

In disasters, battery life is essential as there may not be 55 extra batteries available or a power available to recharge the battery. It is therefore essential to lessen battery utilization. The normal method by which this is accomplished is to not use software that keeps the display on, uses the GPS or transmits on the communications. However, deactivating 60 any one of these processes produces a problem with providing location data to all on the network.

With location sharing there are essentially two times when the location information is essential: a) Where the user wants all to know his/her location and status and the location and 65 status of others and b) When the commander wants to know the location and status of all or of a particular unit. 14

When the user wants others to know the user location and status, the user can simply turn on location reporting software which then turns on the display, the GPS and the communications reporting software causing the reporting of the user location to the ad hoc password protected digital network. However, when the commander or someone else wants to know the location and status of the PDA/PC unit that is conserving battery usage by having user display, GPS and communications transmission turned on, the commander has no method to accomplish this.

This problem is overcome by enabling the commander to transmit a "turn on" IP message to the battery conserving(s) unit(s) by addressing the message to the ad hoc network Server which then sends an SMS message to the addressed phone. The SMS message will be received as long as the phone is powered on, as SMS is integrated with the cell phone's voice communications. The Server could also send a turn on IP message to networked radios, which will then cause the radio's computer to send a digital message to the receiving PC/PDA to activate the user display and location and status reporting software.

Referring now to FIG. 9, the diagram illustrates the enabling of location, status, VoIP, PTT, and video communications between radios and cell phones. The server maintains a temporary retention of names and IP addresses and sends data between all with the same ad hoc name unless addressed to a specific IP address. This requires that there is a radio with digital capabilities attached to the server shown in FIGS. 5, 6, and 7. These radios are set so that they each have a unique IP address. All of the participants have either PDA cell phones or PDAs without cellular. Those that also have PDAs without cellular (or choose not to use cellular) are connected to their radios via a USB cable or Wi-Fi, Bluetooth, or near field communications (NFC) that is part of the PDA/PC OR PDA cell phone. This is illustrated in FIG. 9.

Referring now to FIG. 10 the diagram shows enabling non-RFID equipped PDA phones to receive RFID tag data. The server maintains a temporary retention of how Tags relate to names and sends data to local display and to other ACS network participants. Currently RFID tags are used for many functions, one of which is to track personnel inside a building to the room or compartment in which they are located. This is accomplished by RFID readers that are in each of the rooms. When personnel with an RFID tag get within a particular distance or range of the RFID reader, the reader detects their presence and sends it to a central site server via a USB cable or Wi-Fi. The PC connected to the server displays the personnel room locations. With the invention described herein, the server would then send the location to the ACS PDA/PC phones that would be carried by individuals located throughout the building or ship. The PDA/PC phones would display the room or ships compartments and the location of individuals with RFID tags and simultaneously enable PTT, chat, messaging, whiteboards, commands geo-fence penetration alerts or other types of messages between each of the PDA cell phones. The RFID tag would provide room location data of all to all that are on the ACS Wi-Fi network without their PDA cell phone having an RFID Reader attached to it. The operation is explained in detail in FIG. 10.

The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made there from within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

What is claimed is:

1. A method performed by one or more servers each having one or more processors, the method comprising: executing operations on the one or more processors, the

15

operations comprising:

obtaining first data provided by a first mobile device corresponding to a vehicle, the first data including a first identifier;

permitting the first mobile device corresponding to the vehicle to join a communication network, the permit- 10 ting based on a determination regarding the first data; obtaining second data provided by a second mobile device corresponding to a participant, the second data including a second identifier associated with the participant;

allowing the second mobile device corresponding to the 15 participant to join the communication network, the allowing based on a determination regarding the second

receiving vehicle location data provided by the first the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device;

receiving participant location data provided by the second mobile device corresponding to the participant, 25 wherein the participant location data are associated with the second identifier and indicate coordinates of a geographical location of the second mobile device;

sending participant data to the second mobile device corresponding to the participant, wherein the partici- 30 pant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a position on the participant map corresponding to the coordinates of the geographical location of the second 35 mobile device, (2) display the participant map, and (3) place a first symbol on the participant map at the determined coordinates of the position on the participant map corresponding to the coordinates of the geographical location of the second mobile device;

sending vehicle data to the first mobile device corresponding to the vehicle, wherein the vehicle data comprise the participant location data, wherein the first mobile device corresponding to the vehicle is configured to (1) determine coordinates of a position on the vehicle map 45 corresponding to the coordinates of the geographical location of the first mobile device, (2) display the vehicle map, and (3) place a second symbol on the vehicle map at the determined coordinates of the position on the vehicle map corresponding to the coordi- 50 nates of the geographical location of the first mobile device;

receiving participant selection data provided by the second mobile device corresponding to the participant, the participant selection data corresponding to user input 55 provided via a display of the second mobile device;

based on the participant selection data, performing one or more acts selected from the group consisting of: sending updated vehicle data to the first mobile device corresponding to the vehicle, sending updated partici- 60 pant data to the second mobile device corresponding to the participant, and sending a message to the first mobile device corresponding to the vehicle;

receiving entity-of-interest data transmitted by the second mobile device, the entity-of-interest data comprising 65 coordinates of a geographical location of a new entity of interest, wherein the second mobile device is con16

figured to (1) identify participant interaction with a display of the second mobile device, the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2) display an entity symbol representing the new entity of interest at the selected position on the participant map, (3) determine coordinates of a geographical location of the new entity of interest based on coordinates of the selected position on the participant map, and (4) transmit the entity-ofinterest data; and

sending the entity-of-interest data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to place the entity symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding to the geographical location of the new entity of interest.

- 2. The method of claim 1, wherein performing the one or mobile device corresponding to the vehicle, wherein 20 more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to display the updated participant data within the participant map.
 - 3. The method of claim 2, wherein the updated participant data comprise updated vehicle location data indicating coordinates of an updated geographical location of the first mobile device corresponding to the vehicle.
 - 4. The method of claim 1, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to replace the participant map with an updated participant map on the display of the second mobile device based at least in part on the updated participant data.
 - 5. The method of claim 1, wherein performing the one or more acts comprises sending, based on the participant selec-40 tion data, the message to the first mobile device corresponding to the vehicle.
 - 6. The method of claim 5, wherein the message to the first mobile device corresponding to the vehicle includes the second identifier and updated participant location data.
 - 7. The method of claim 1, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to display the updated vehicle data within the vehicle map.
 - 8. The method of claim 1, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to replace the vehicle map with an updated vehicle map on the display of the first mobile device based at least in part on the updated vehicle data.
 - 9. The method of claim 1, wherein the vehicle map is interactive.
 - 10. The method of claim 1, wherein the participant map is interactive.
 - 11. The method of claim 1, wherein the new entity of interest is an event and the location of the new entity of interest is a location of the event.
 - 12. The method of claim 1, wherein the new entity of interest location is different from the locations of the first and second mobile devices.

17

- 13. The method of claim 5, wherein the message comprises at least one of a text message, a photograph, or a video
 - **14**. A system comprising:
 - one or more servers each having one or more processors, 5 the processors configured to execute instructions to perform operations comprising:
 - obtaining first data provided by a first mobile device corresponding to a vehicle, the first data including a first identifier;
 - permitting the first mobile device corresponding to the vehicle to join a communication network, the permitting based on a determination recording the first data.
 - ting based on a determination regarding the first data; obtaining second data provided by a second mobile device corresponding to a participant, the second data including a second identifier associated with the participant;
 - allowing the second mobile device corresponding to the participant to join the communication network, the allowing based on a determination regarding the second data:
 - receiving vehicle location data provided by the first mobile device corresponding to the vehicle, wherein the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device;
 - receiving participant location data provided by the second mobile device corresponding to the participant, wherein the participant location data are associated with the second identifier and indicate coordinates of a geographical location of the second mobile device;
 - sending participant data to the second mobile device corresponding to the participant, wherein the participant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a 35 position on the participant map corresponding to the coordinates of the geographical location of the second mobile device, (2) display the participant map, and (3) place a first symbol on the participant map at the determined coordinates of the position on the participant map corresponding to the coordinates of the geographical location of the second mobile device;
 - sending vehicle data to the first mobile device corresponding to the vehicle, wherein the vehicle data comprise the participant location data, wherein the first mobile 45 device corresponding to the vehicle is configured to (1) determine coordinates of a position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device, (2) display the vehicle map, and (3) place a second symbol on the 50 vehicle map at the determined coordinates of the position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device;
 - receiving participant selection data provided by the second mobile device corresponding to the participant, the participant selection data corresponding to user input provided via a display of the second mobile device;
 - based on the participant selection data, performing one or more acts selected from the group consisting of: sending updated vehicle data to the first mobile device corresponding to the vehicle, sending updated participant data to the second mobile device corresponding to the participant, and sending a message to the first mobile device corresponding to the vehicle;

 65
 - receiving entity-of-interest data transmitted by the second mobile device, the entity-of-interest data comprising

18

- coordinates of a geographical location of a new entity of interest, wherein the second mobile device is configured to (1) identify participant interaction with a display of the second mobile device, the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2) display an entity symbol representing the new entity of interest at the selected position on the participant map, (3) determine coordinates of a geographical location of the new entity of interest based on coordinates of the selected position on the participant map, and (4) transmit the entity-of-interest data; and
- sending the entity-of-interest data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to place the entity symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding to the geographical location of the new entity of interest.
- 15. The system of claim 14, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to display the updated participant data within the participant map.
- 16. The system of claim 15, wherein the updated participant data comprise updated vehicle location data indicating coordinates of an updated geographical location of the first mobile device corresponding to the vehicle.
- 17. The system of claim 14, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to replace the participant map with an updated participant map on the display of the second mobile device based at least in part on the updated participant data.
- 18. The system of claim 14, wherein performing the one or more acts comprises sending, based on the participant selection data, the message to the first mobile device corresponding to the vehicle.
- 19. The system of claim 18, wherein the message to the first mobile device corresponding to the vehicle includes the second identifier and updated participant location data.
- 20. The system of claim 14, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to display the updated vehicle data within the vehicle map.
- 21. The system of claim 14, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to replace the vehicle map with an updated vehicle map on the display of the first mobile device based at least in part on the updated vehicle data.
- 22. The system of claim 14, wherein the vehicle map is interactive.
- 23. The system of claim 14, wherein the participant map is interactive.
- 24. The system of claim 14, wherein the new entity of interest is an event and the location of the new entity of interest is a location of the event.
- 25. The system of claim 14, wherein the new entity of interest location is different from the locations of the first and second mobile devices.

19 20

26. The system of claim 18, wherein the message comprises at least one of a text message, a photograph, or a video.

* * * * *

Exhibit F

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

AGIS SOFTWARE DEVELOPMENT LLC, Case No. 2:21-cv-00072-JRG (LEAD CASE) Plaintiff, **JURY TRIAL DEMANDED** v. T-MOBILE USA, INC. and T-MOBILE US, INC., Defendants. Case No. 2:21-cv-00024-JRG AGIS SOFTWARE DEVELOPMENT LLC, (CONSOLIDATED CASE) Plaintiff, JURY TRIAL DEMANDED v. LYFT, INC., Defendant.

PLAINTIFF'S DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Plaintiff AGIS Software Development LLC ("AGIS") hereby makes the following infringement disclosures under the Patent Local Rules with respect to United States Patent Nos. 7,031,728; 7,630,724; 8,213,970; 10,299,100, and 10,341,838 (collectively, "Patents-in-Suit"). AGIS's investigation is ongoing and discovery has not yet commenced. Accordingly, these disclosures are based on information available to AGIS at this time. AGIS reserves the right to supplement this disclosure after further discovery from defendant and non-parties, particularly documents and other discovery regarding the Lyft Accused Products set forth below. AGIS also reserves the right to assert additional claims of the Patents-in-Suit, accuse different

products, or find alternative literal and/or equivalent infringing elements in the Lyft Accused Products.

I. DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS PURSUANT TO PATENT LOCAL RULE 3-1

A. ASSERTED CLAIMS

Defendant Lyft, Inc. ("Defendant" or "Lyft") has infringed and continues to infringe at least the following claims of the Patents-in-Suit in connection with the Lyft Accused Products set forth below:

- Claim 7 of the '728 Patent;
- Claims 9, 12-16 of the '724 Patent;
- Claims 2, 10-13 of the '970 Patent;
- Claims 1-31 of the '100 Patent; and
- Claims 1-26 of the '838 Patent.

AGIS reserves the right to seek leave of court to add, delete, substitute, or otherwise amend this list of asserted claims should further discovery, the Court's claim construction, or other circumstances so merit.

B. ACCUSED INSTRUMENTALITIES

AGIS is currently aware that the following Lyft Products infringe each of the Patents-in-Suit, either alone or in concert with one or more other Lyft Accused Products:

- Lyft applications, services, and servers; and
- Lyft Driver applications, services, and servers.

AGIS reserves the right to amend this list of accused instrumentalities, as well as other information contained in this document and the exhibits hereto, to incorporate new information

learned during the course of discovery including, but not limited to, the inclusion of newlyreleased products or any other equivalent devices ascertained through discovery.

C. CLAIM CHARTS

Claim charts identifying a location of every element of every asserted claim of the Patents-in-Suit within Lyft Accused Products are attached hereto as Exhibits A-E. AGIS believes that the citations in the claim charts are representative of all Lyft Accused Products. For example, where AGIS cites reference material or images representing an application, service, or server that citation is representative for all other such applications, services, or servers including all prior and future versions unless otherwise noted. AGIS reserves the right to amend these claim charts as well as other information contained in this document and the exhibits hereto, to incorporate new information learned during the course of discovery including, but not limited to, information that is not publicly available or readily discernible without discovery. AGIS further reserves the right to amend these claim charts, as well as other information contained in this document and the exhibits attached hereto, pursuant to Patent Local Rules 3-1(g) and 3-6.

D. LITERAL INFRINGEMENT AND DOCTRINE OF EQUIVALENTS

AGIS asserts that, under the proper construction of the asserted claims and their claim terms, the limitations of the asserted claims of the Patents-in-Suit are literally present in the Lyft Accused Products as set forth in the claim charts attached hereto as Exhibits A-E. AGIS contends that any and all elements found not to be literally infringed are infringed under the doctrine of equivalents because the differences between the claimed inventions and the accused instrumentalities, if any, are insubstantial.

AGIS contends that Lyft directly infringes the asserted claims by making, using, offering for sale, selling, and importing into the United States the accused instrumentalities as well as indirectly infringe by contributing to and/or inducing others (*e.g.*, Lyft customers or its Lyft

customers' customers) to directly infringe those claims by making, using, offering for sale, or selling the Lyft Accused Products. AGIS contends that Lyft directly infringes the asserted claims by testing the Lyft Accused Products in the United States.

Pursuant to Patent Local Rule 3-6(a)(1), AGIS reserves the right to amend its Infringement Contentions as to literal infringement or infringement under the doctrine of equivalents, *e.g.*, in light of the Court's claim construction.

E. PRIORITY DATES

Under P.R. 3-1(e), each of the asserted claims of the Patents-in-Suit are entitled to a priority date of at least as early as September 21, 2004. AGIS reserves the right to establish an earlier date of invention based upon actions related to conception and reduction to practice of the claimed inventions.

F. AGIS'S OWN PRODUCTS

Pursuant to P.R. 3-1(f), AGIS contends that AGIS, Inc.'s LifeRing products are covered by at least one of claim 7 of the '728 Patent; claims 9, 12-16 of the '724 Patent; claims 2, 10-13 of the '970 Patent; claims 1-31 of the '100 Patent; and claims 1-26 of the '838 Patent. AGIS's investigation is ongoing and AGIS reserves the right to supplement, amend, or amend these contentions in view of facts learned during discovery, the release of new products, or the modification of current products, and/or the Court's claim construction.

II. PRODUCTION OF DOCUMENTS PURSUANT TO PATENT LOCAL RULE 3-2

4

¹ AGIS continues to rely on interim priority dates identified in each of the Patents-in-Suit to establish priority prior to the actual filing date of the Patents-in-Suit (*e.g.*, interim priority date April 17, 2006 which corresponds to the filing date of U.S. Patent No. 7,630,724).

AGIS is producing or making available for inspection documents that are in AGIS's possession, custody, or control as set forth in Patent Local Rule 3-2. An AGIS 3-2 Production Index identifying these documents is attached hereto.

This preliminary identification of documents is for convenience and is not an admission that each document falls within any exemplary categories in the Patent Local Rules, or that any document qualifies as prior art. AGIS is continuing with its investigation, particularly with respect to ESI. Thus, AGIS reserves its right to add to, delete from, or otherwise modify its disclosures in this section as its investigation proceeds.

Production of these documents is governed by Patent Local Rule 2-2, and, with the exception of documents produced pursuant to P.R. 3.2(c) and public documents listed in the infringement charts, are considered "Confidential – Outside Attorneys Eyes Only" and disclosure of the confidential document or information shall be limited to each party's outside attorney(s) of record and the employees of such outside attorney(s).

Dated: May 19, 2021 Respectfully submitted,

FABRICANT LLP

/s/ Alfred R. Fabricant

Alfred R. Fabricant NY Bar No. 2219392

Email: ffabricant@fabricantllp.com

Peter Lambrianakos NY Bar No. 2894392

Email: plambrianakos@fabricantllp.com

Vincent J. Rubino, III NY Bar No. 4557435

Email: vrubino@fabricantllp.com

FABRICANT LLP

411 Theodore Fremd Road, Suite 206 South

Rye, New York 10580 Telephone: (212) 257-5797 Facsimile: (212) 257-5796

5

ATTORNEYS FOR PLAINTIFF, AGIS SOFTWARE DEVELOPMENT LLC

CERTIFICATE OF SERVICE

The undersigned hereby certifies that, on May 19, 2021, all counsel of record are being served with a copy of this document via electronic mail.

<u>/s/ Alfred R. Fabricant</u>
Alfred R. Fabricant

AGIS 3-2 PRODUCTION INDEX

3-2(a)	Bates Start AGISSOFTWARE_0000001	Bates End AGISSOFTWARE_0000062
3-2(b)	Bates Start AGISSOFTWARE_0007713	Bates End AGISSOFTWARE_0007871
3-2(c)	Bates Start AGISSOFTWARE 0000063	Bates End AGISSOFTWARE 0007712

Public Documents Listed in Infringement Charts

Bates StartAGIS-LYFT0000001

Bates End
AGIS-LYFT0000114

Based on information presently available, AGIS Software Development LLC ("AGIS") contends that Defendant Lyft Inc. (collectively "Lyft" or "Defendant") infringes claims 1-26 (the "Asserted Claims") of U.S. Patent No. 10,341,838 (the "838 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise all versions of the Lyft Application made, used, sold, offered for sale, or otherwise provided, after September 21, 2004. For example, the Accused Products comprise the Lyft application installed on all Android, iOS, Blackberry, and Windows Mobile based mobile devices (*e.g.* smartphones, tablets, laptops, and smart watches), and any variants thereof. AGIS reserves the right to amend this list of Accused Products as discovery progresses.

Lyft directly infringes each of the Asserted Claims by using, importing, testing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. On information and belief, Lyft knows that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

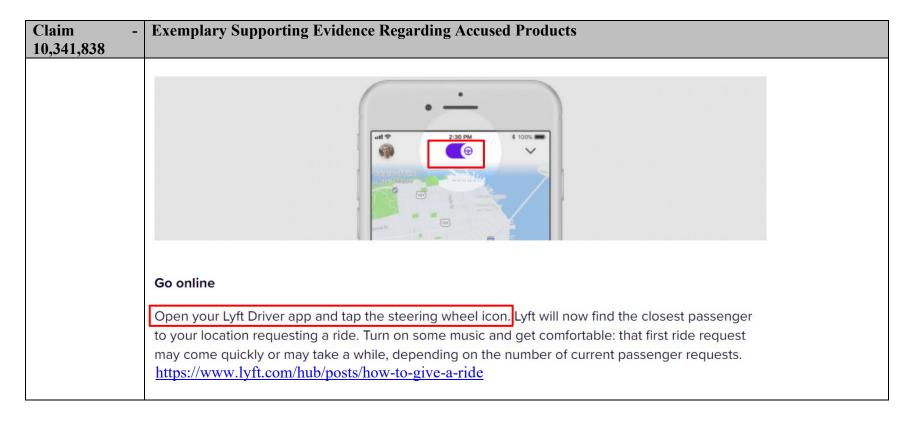
On information and belief, the charted version of the Lyft application is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android, iOS, Blackberry, and Windows Mobile operating systems.

AGIS does not concede that any claims of the '838 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its Accused Products. Accordingly, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS. Furthermore, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including, but not limited to, positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

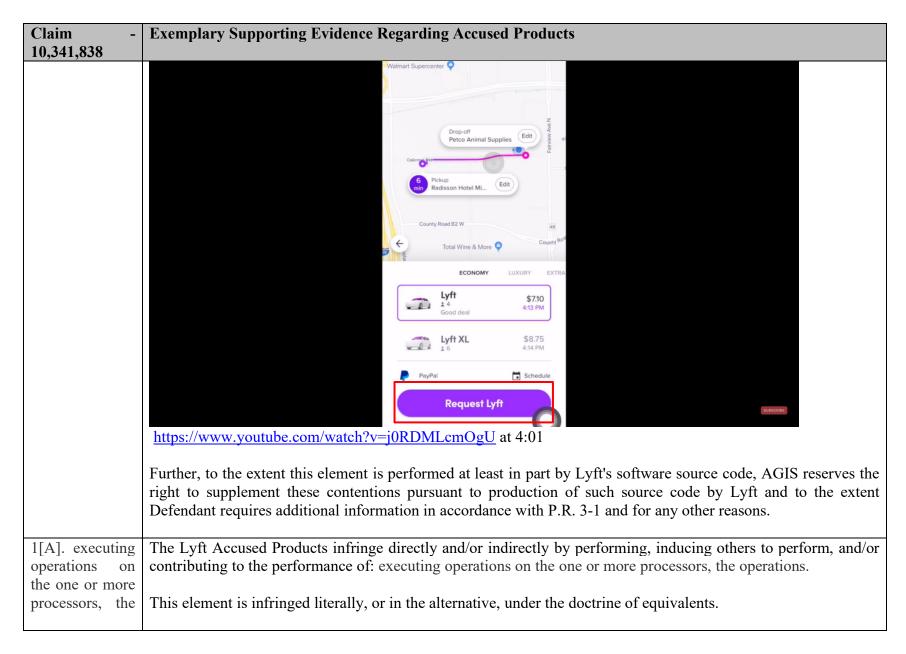
The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

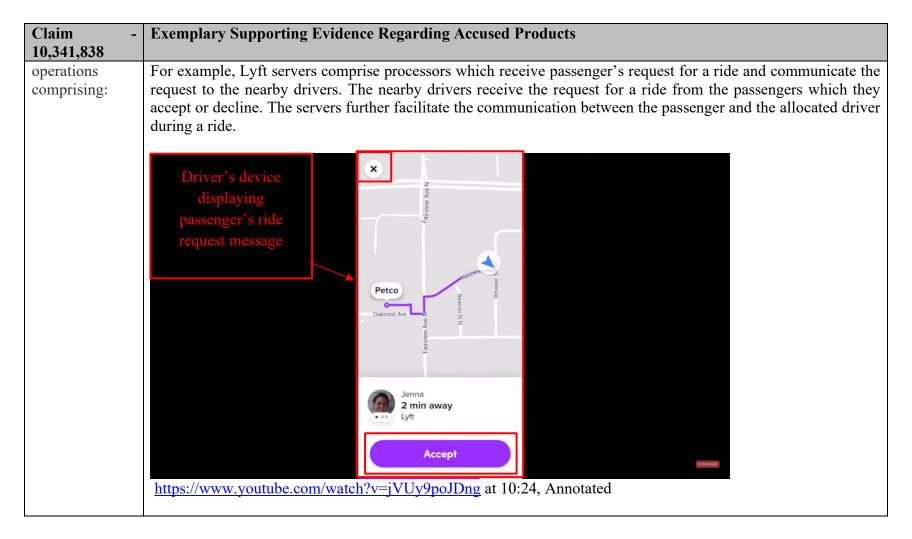
¹ The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. No. 205 (Lead Case) (E.D. Tex. Oct. 10, 2018) and *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. No. 147 (Lead Case) (E.D. Tex. Dec. 20, 2020). AGIS reserves the right to update its constructions and contentions in view of this Court's claim construction order.

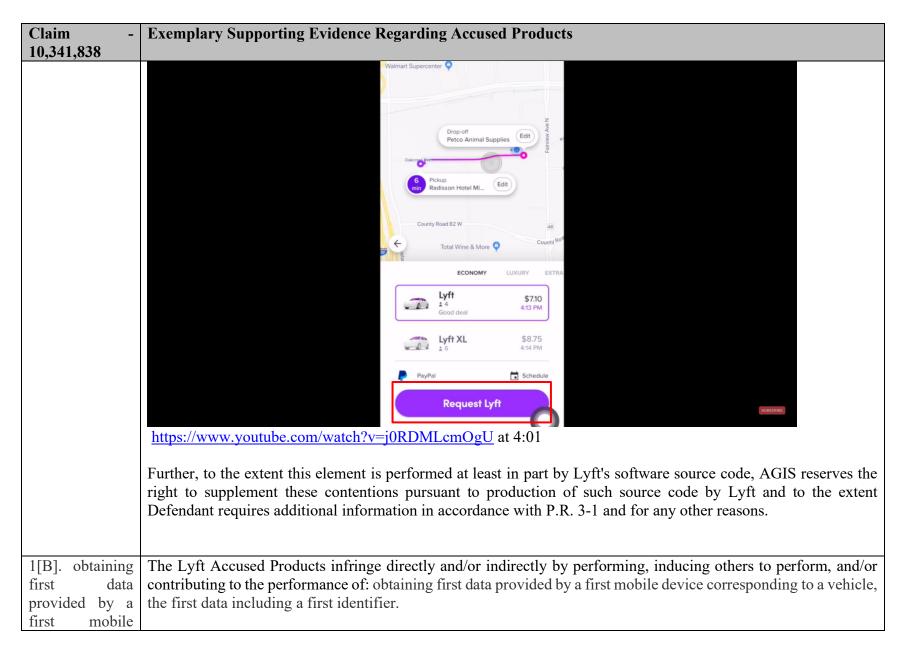
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
1[P]. A method performed by one or more servers each	The Lyft Accused Products perform the computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method performed by one or more servers each having one or more processors
having one or more	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
processors, the method comprising:	For example, Lyft provides the Lyft app for passengers and the Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. Lyft provides one or more servers with processors (either hardware or software). The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft



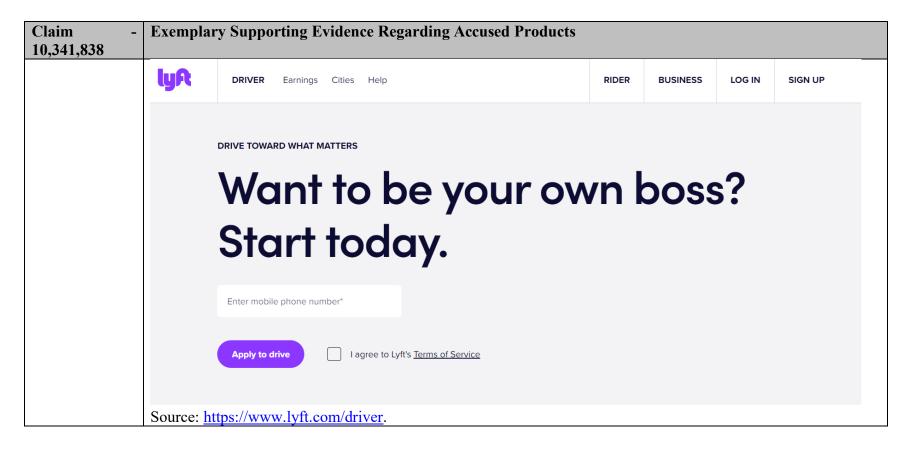


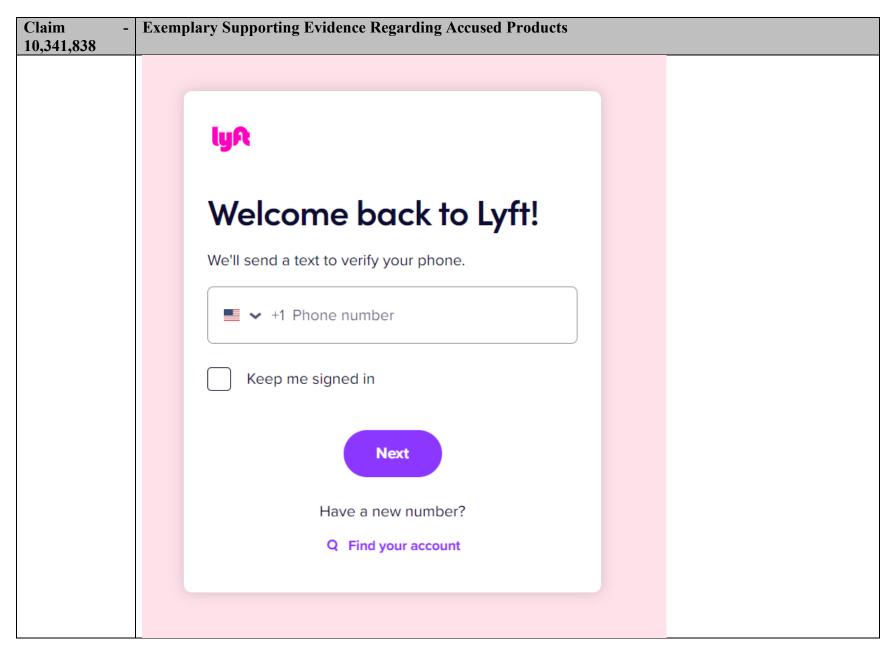






Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
device	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
corresponding	
to a vehicle, the	For example, the Lyft driver sets up his/her account by providing information including but not limited to name,
first data	email address, phone number, driver's license and vehicle information. On information and belief, Lyft assigns
including a first	one or more indentifications associated with the account.
identifier	
	For example, the Lyft Driver app installed in a driver's mobile device allows a driver to set up his/her account by providing information including but not limited to name, email address, phone number, driver's license and vehicle information. The Lyft server(s) perform this limitation when they obtain the account creation data from the Lyft app for drivers. The Lyft server(s) also perform this limitation, after account creation, when they obtain the data during the sign-in or log-in process from the Lyft app for drivers. On information and belief, the Lyft server(s) also perform this limitation when they obtain the data by requesting status or other data via the Lyft app for drivers. In all cases, the first identifier is information associated with the identity of the driver, account, vehicle, or Lyft app
	for drivers.

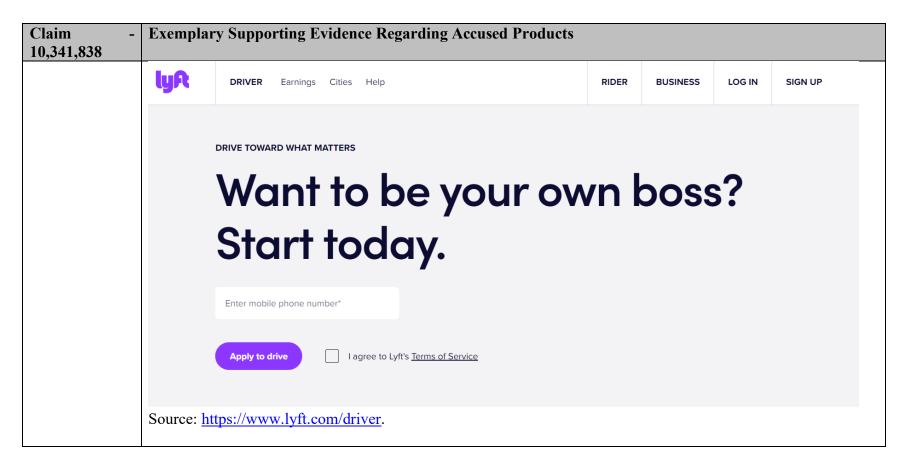


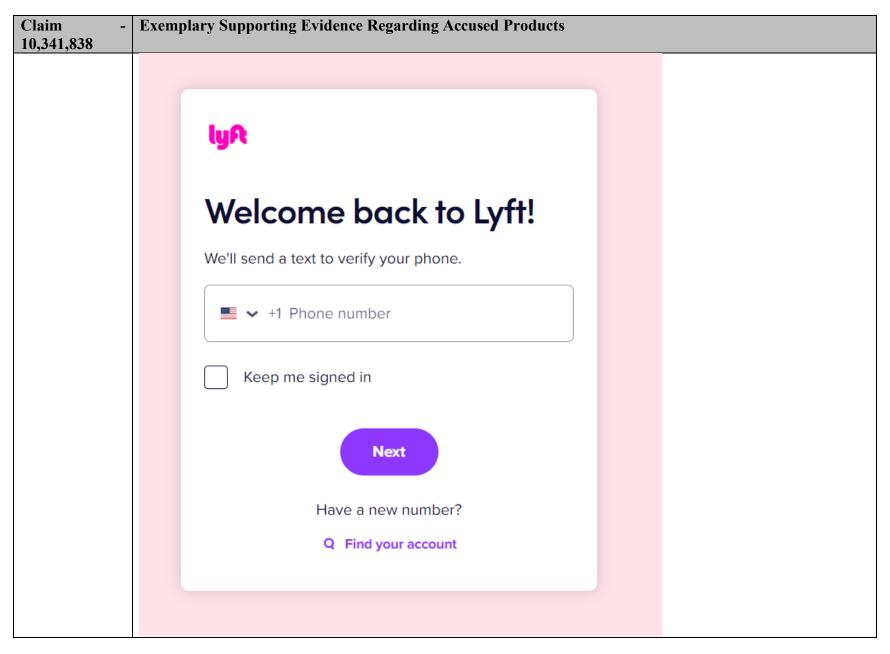


Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State</u> .
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check DM/ check
	 DMV check Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
1[C]. permitting	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
the first mobile	contributing to the performance of: permitting the first mobile device corresponding to the vehicle to join a
device	communication network, the permitting based on a determination regarding the first data.
corresponding	
to the vehicle to	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
join a	
communication	The Lyft server(s) perform this limitation when the server uses the account or identity information described above
network, the	to add the account/driver/vehicle to the Lyft platform or network of drivers and passengers. The Lyft server(s) also
permitting	perform this limitation when the server uses the account or identity information to create or activate or update an
based on a	account using the account or identity information described above. The Lyft server(s) also perform this limitation
determination	when a driver completes the sign-in or log-in process. On information and belief, the Lyft server(s) also perform
regarding the	this step using a verification or validation process within sign-up, sign-in, or status request process.On information
first data	and belief, the account or identity information is associated with the Lyft platform or network of drivers and
	passengers or a subset of the platform or network.



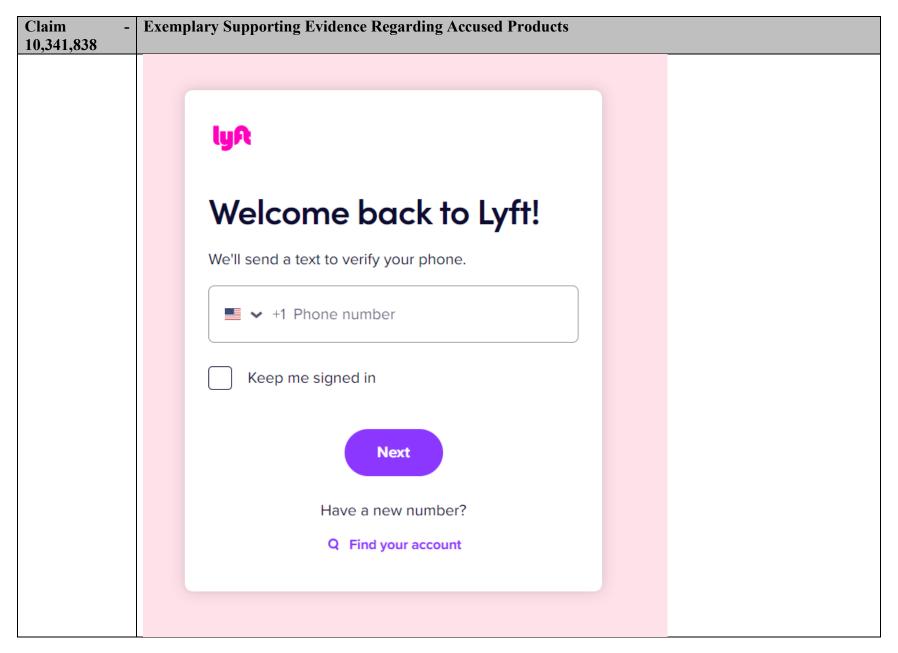


Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check
	DMV check
	Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

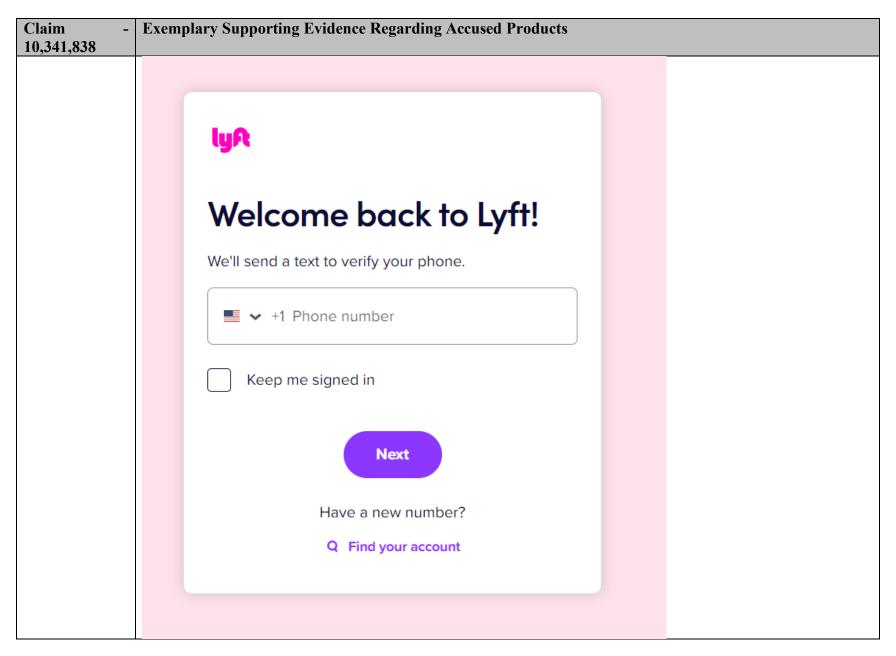
Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
1[D]. obtaining	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
second data	contributing to the performance of: obtaining second data provided by a second mobile device corresponding to a
provided by a	participant, the second data including a second identifier associated with the participant.
second mobile	
device	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
corresponding	
to a participant,	For example, the Lyft app installed on a passenger's mobile device allows a passenger to set up his/her account by
the second data	providing information including but not limited to name, email address and phone number. The Lyft server(s)
including a	perform this limitation when they obtain the account creation data from the Lyft app for riders. The Lyft server(s)
second	also perform this limitation, after account creation, when they obtain the data during the sign-in or log-in process
identifier	from the Lyft app for riders. On information and belief, the Lyft server(s) also perform this limitation when they
associated with	obtain the data by requesting status or other data via the Lyft app for riders. In all cases, the second identifier is
the participant	information associated with the identity of the rider, account, device, phone number, or Lyft app for riders.

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Sign up for a Lyft account
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	Log-in troubles? Read How to fix log-in issues for more.
	Age requirement: You must be at least 18 years old to create a Lyft account, request a ride, or have a ride requested for you.
	Back to top
	Source: https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account.

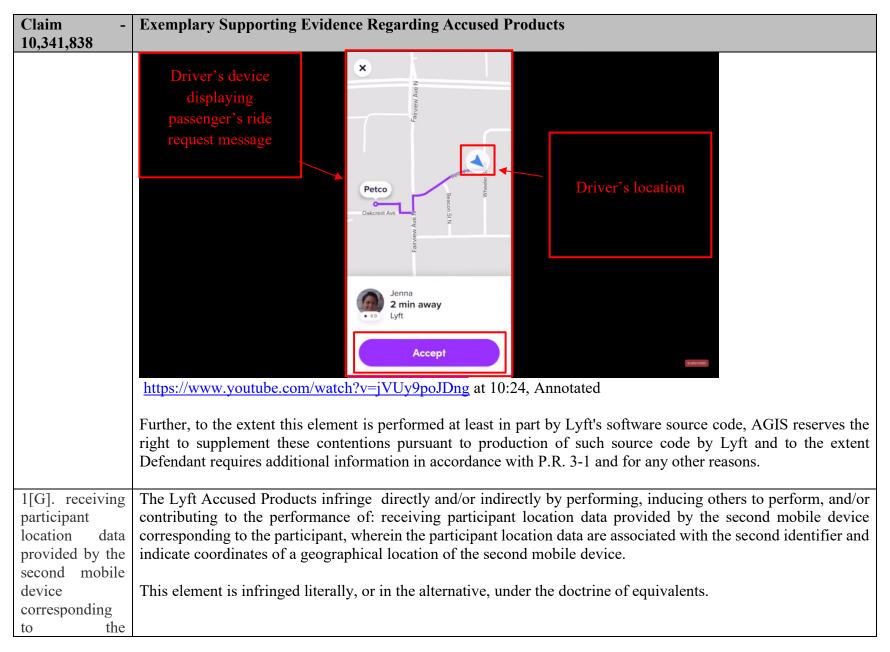


Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[E]. allowing the second mobile device corresponding	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: allowing the second mobile device corresponding to the participant to join the communication network, the allowing based on a determination regarding the second data.
to the participant to	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
join the communication network, the allowing based on a determination regarding the second data	The Lyft server(s) perform this limitation when the server uses the account or identity information described above to add the account/rider/phone number/Lyft app for riders to the Lyft platform or network of drivers and passengers. The Lyft server(s) also perform this limitation when the server uses the account or identity information to create or activate or update an account using the account or identity information described above. The Lyft server(s) also perform this limitation when a rider completes the sign-in or log-in process. On information and belief, the Lyft server(s) also perform this step using a verification or validation process within sign-up, sign-in, or status request process. On information and belief, the account or identity information is associated with the Lyft platform or network of drivers and passengers or a subset of the platform or network.

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Sign up for a Lyft account
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	Log-in troubles? Read How to fix log-in issues for more.
	Age requirement: You must be at least 18 years old to create a Lyft account, request a ride, or have a ride requested for you.
	Back to top
	Source: https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account

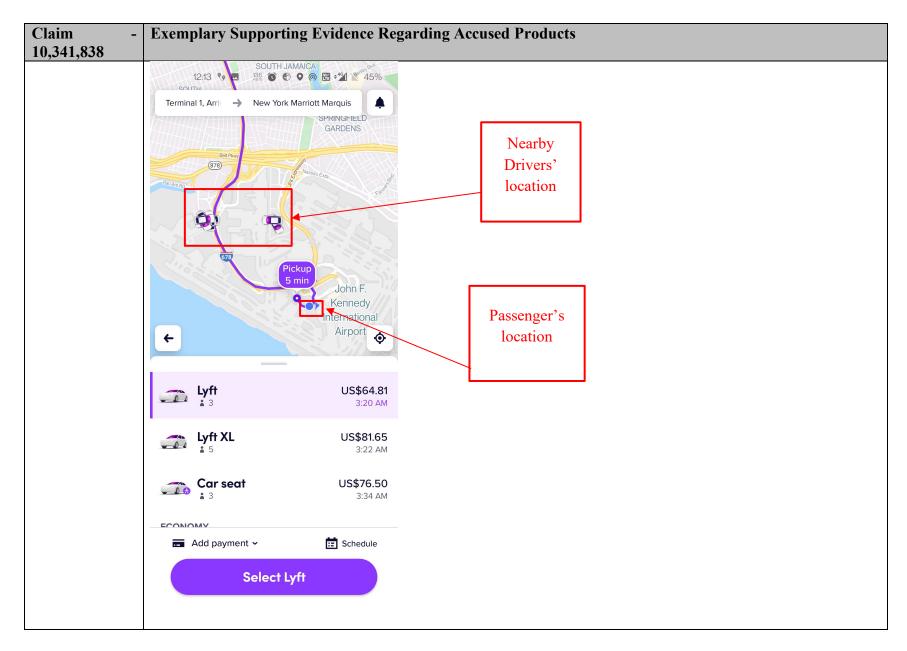


Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[F]. receiving vehicle location data provided by the first mobile device	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving vehicle location data provided by the first mobile device corresponding to the vehicle, wherein the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device.
corresponding to the vehicle,	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
wherein the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device	The Lyft server(s) perform this limitation when they receive driver location data associated with the account or identity information described above. This information is received at the Lyft server(s) via the Lyft app for drivers. For example, when a driver is online and ready to take request for rides, the driver's app sends its location coordinates to the Lyft servers enabling the servers to match the driver with the nearby passengers. The location data of the driver is associated with his/her account or identity data described above, including but not limited to name, phone number and vehicle information. On information and belief, the driver's location data comprises geographical coordinates or geotagged/geocoded/georeferenced information related to a driver's geographical location.

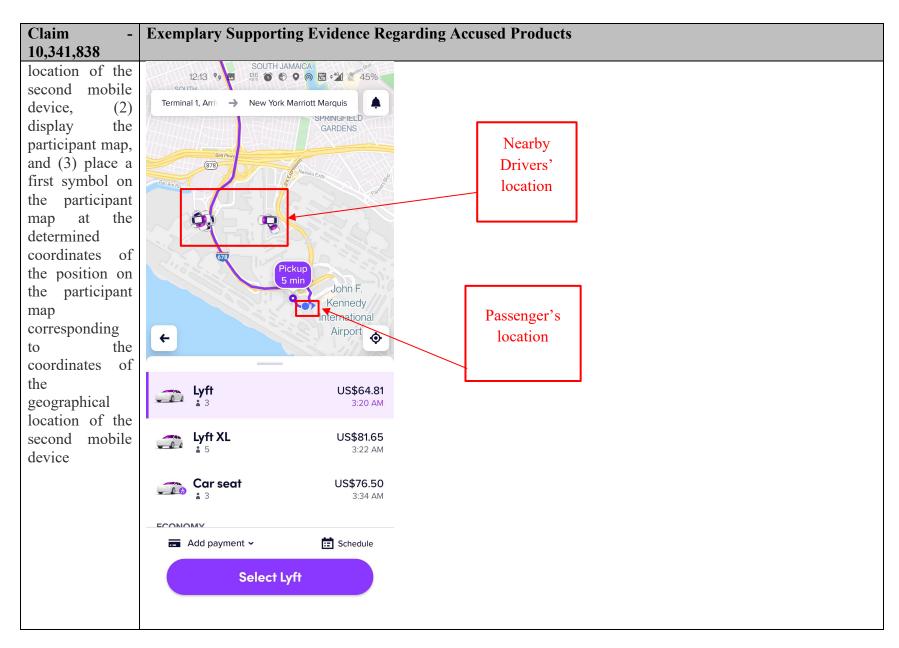


Claim **Exemplary Supporting Evidence Regarding Accused Products** 10,341,838 The Lyft server(s) perform this limitation when they receive rider location data associated with the account or participant, wherein identity information described above. This information is received at the Lyft server(s) via the Lyft app for riders. participant For example, when a passenger books a ride, the passenger's Lyft app for riders sends its current location coordinates to the Lyft servers enabling the servers to match the passenger with the nearby drivers. The location location data are associated with data of the passenger is associated with his/her account or identity data described above including but not limited to username, email address and phone number. On information and belief, the rider's location data comprises the second geographical coordinates or geotagged/geocoded/georeferenced information related to a rider's geographical identifier and indicate location. coordinates of a geographical location of the second mobile Drop-off Cancel device End Search destination Radisson Hotel Minneapolis/St. Paul N.. 2540 Cleveland Ave N, Roseville Target Field Station Minneapolis, MN 55401 Historic John P Furber Farm 7310 Lamar Ave S, Cottage Grove Sheraton St. Paul Woodbury Hotel 676 Bielenberg Dr, Woodbury Rosedale Center 1595 MN-36, Roseville https://www.voutube.com/watch?v=i0RDMLcmOgU at 3:27

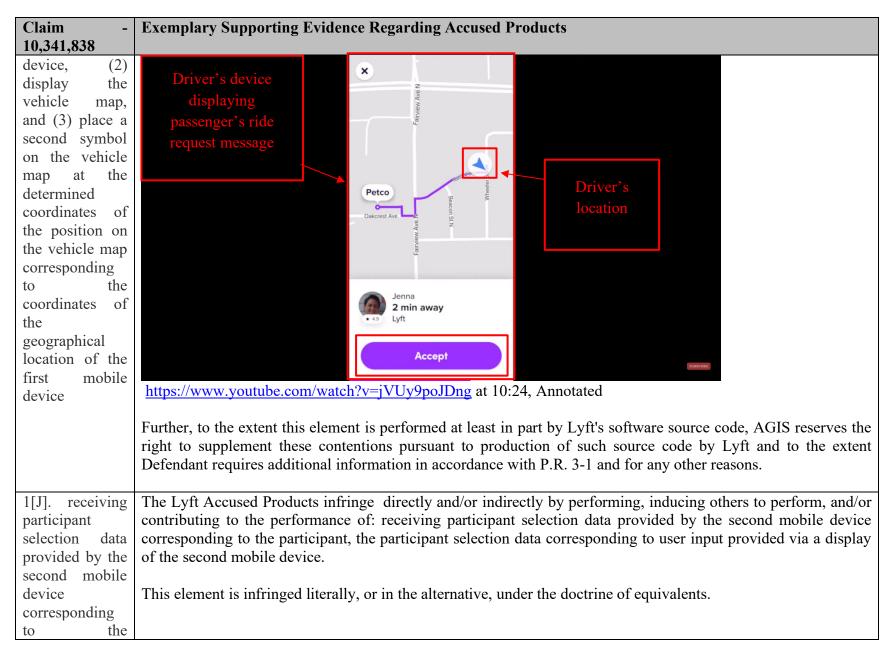




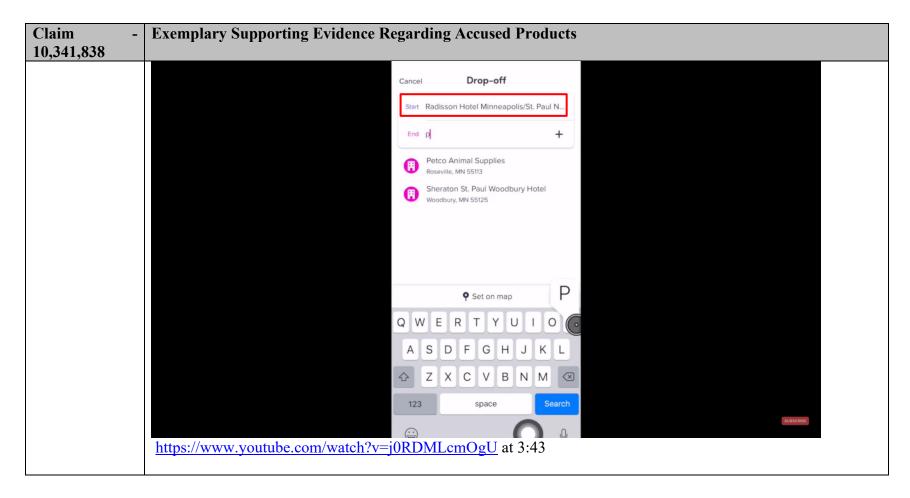
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[H]. sending participant data to the second mobile device corresponding to the participant, wherein the participant data	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: sending participant data to the second mobile device corresponding to the participant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a position on the participant map corresponding to the coordinates of the geographical location of the second mobile device, (2) display the participant map, and (3) place a first symbol on the participant map at the determined coordinates of the position on the participant map corresponding to the coordinates of the geographical location of the second mobile device. This element is infringed literally, or in the alternative, under the doctrine of equivalents.
comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a position on the participant map corresponding to the coordinates of the geographical	The Lyft server(s) communicates driver geographical location to the rider's Lyft app. The rider's lyft app is programmed to receive the driver location data and process it to display a map with a symbol indicating the driver's location on the map. The rider's Lyft app includes instructions for placing the symbol at the map location corresponding to the geographical coordinates of the driver (i.e. its vehicle). For example, when the Lyft passenger uses the Lyft app, the passenger views the location of the vehicle/driver because the Lyft server(s) transmits the current location data of the drivers for display on a map showing nearby drivers' vehicles ("vehicle location data") as per their location coordinates. In another example, after the passenger requests a ride or begins a ride, the Lyft server(s) communicate the driver's location to the passenger's Lyft app for riders and this location is displayed as a symbol on the map to the passenger. Further, the Lyft app for riders determines the passenger location coordinates from the location data received from the server and adds a symbol corresponding to the coordinates on the map.

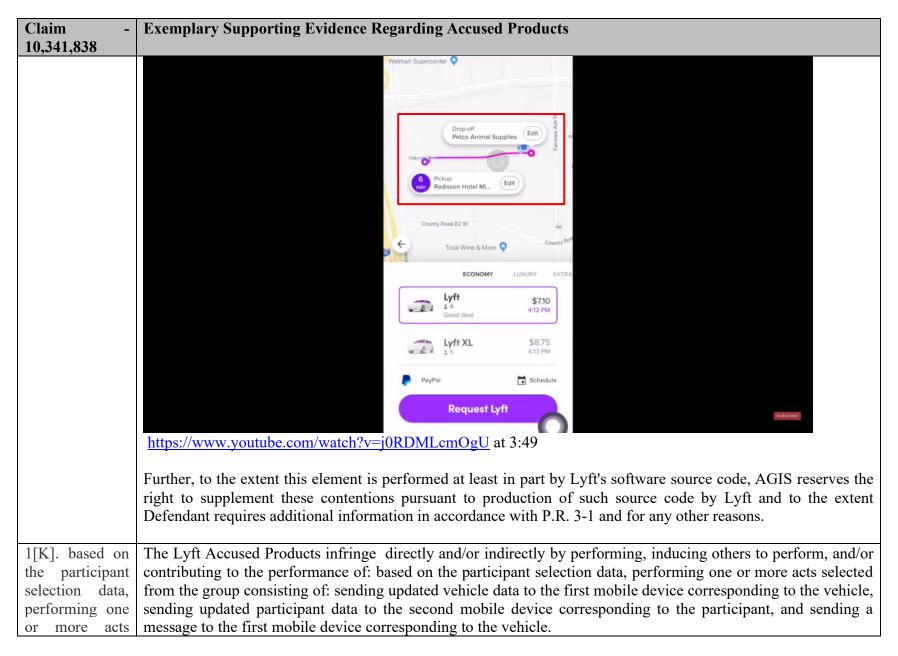


Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
10,541,636	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[I]. sending vehicle data to the first mobile device corresponding to the vehicle, wherein the vehicle data	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: sending vehicle data to the first mobile device corresponding to the vehicle, wherein the vehicle data comprise the participant location data, wherein the first mobile device corresponding to the vehicle is configured to (1) determine coordinates of a position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device, (2) display the vehicle map, and (3) place a second symbol on the vehicle map at the determined coordinates of the position on the vehicle map corresponding to the coordinates of the geographical location of the first mobile device;
comprise the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
location data, wherein the first mobile device corresponding to the vehicle is	The Lyft server(s) communicates rider/passenger geographical location to the driver's Lyft app. The driver's lyft app is programmed to receive the driver location data and process it to display a map with a symbol indicating the rider's location on the map. The driver's Lyft app includes instructions for placing the symbol at the map location corresponding to the geographical coordinates of the rider.
configured to (1) determine coordinates of a position on the vehicle map corresponding	For example, when the Lyft driver uses the Lyft app, the driver can see the location of a passenger/rider because the server transmits the location data of the passenger/rider. The driver, when using the Lyft app for drivers, receives messages from the passengers requesting rides. The message comprises the passenger's location on the map. The Driver's Lyft app determines the location coordinates from the rider location data received from the Lyft server and places a symbol corresponding to the coordinates of the rider's location on the map in the driver's Lyft app.
to the coordinates of the geographical location of the first mobile	

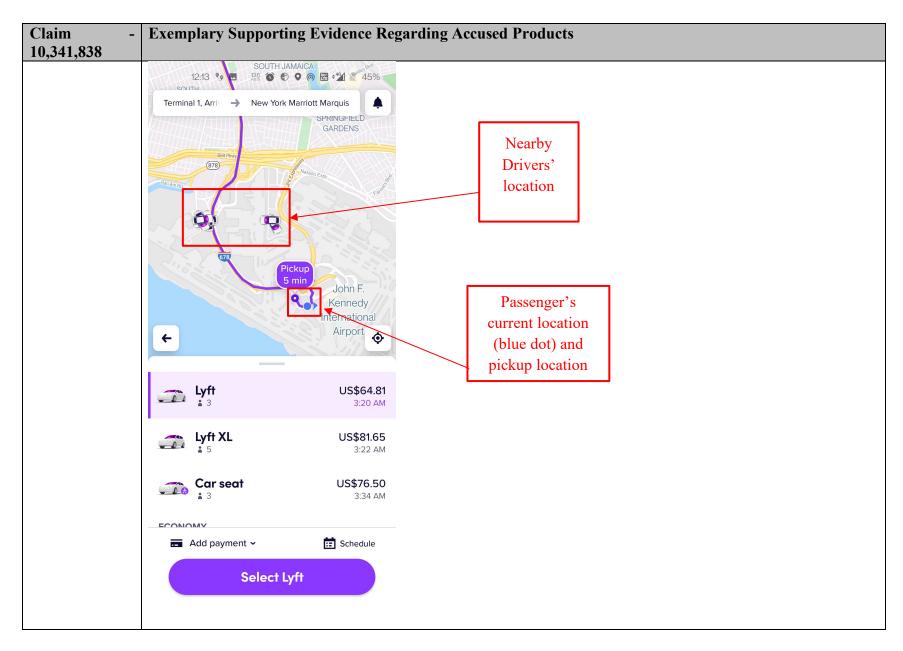


Claim **Exemplary Supporting Evidence Regarding Accused Products** 10,341,838 The Lyft server(s) receives data indicating input from the rider/passenger via the Lyft app for riders. For example, participant, the participant the Lyft passenger provides input such as data related to a pickup location (current location or any specific location) and destination when booking a ride. The Lyft server(s) also receives user input regarding a vehicle or vehicle selection data type, a time or schedule, a cost or estimate, a change in destination, an addition of a stop or multiple destinations, corresponding to user input a share ride option, a share ETA option, and/or a route, view, or map selection. The Lyft server(s) also receives user input data indicating an acceptance or booking of a ride alone or in combination with other user inputs. The provided via a display of the Lyft server(s) also receives user input regarding a message from the rider to the driver. The rider input via the Lyft second mobile app rider which is received at the server may be performed in multiple inputs. device Drop-off Cancel End Search destination Radisson Hotel Minneapolis/St. Paul N... 2540 Cleveland Ave N. Roseville Target Field Station Minneapolis MN 55401 Historic John P Furber Farm 7310 Lamar Ave S, Cottage Grove Sheraton St. Paul Woodbury Hotel 676 Bielenberg Dr, Woodbury Rosedale Center 1595 MN-36, Roseville https://www.youtube.com/watch?v=j0RDMLcmOgU at 3:27

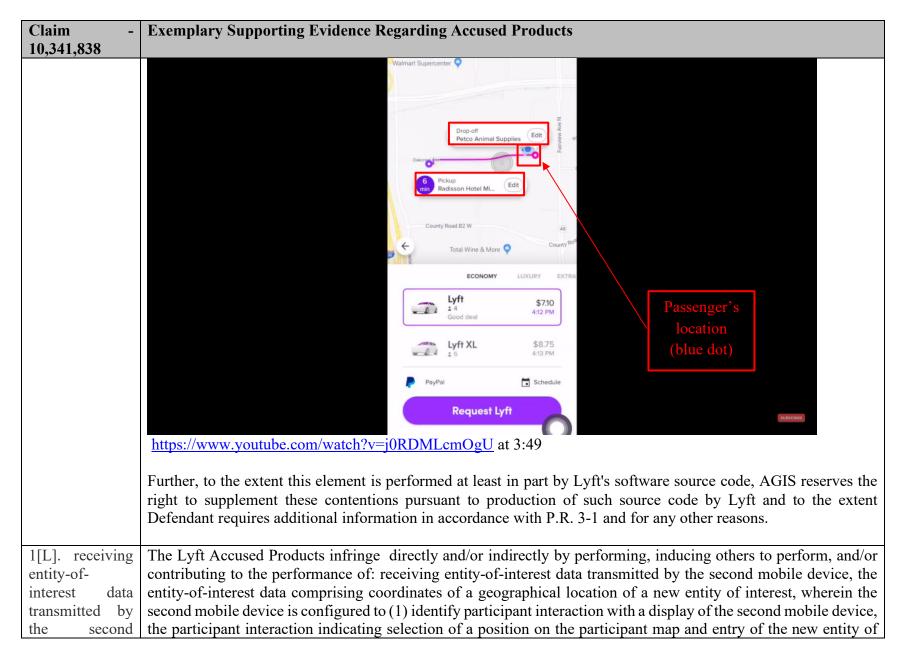




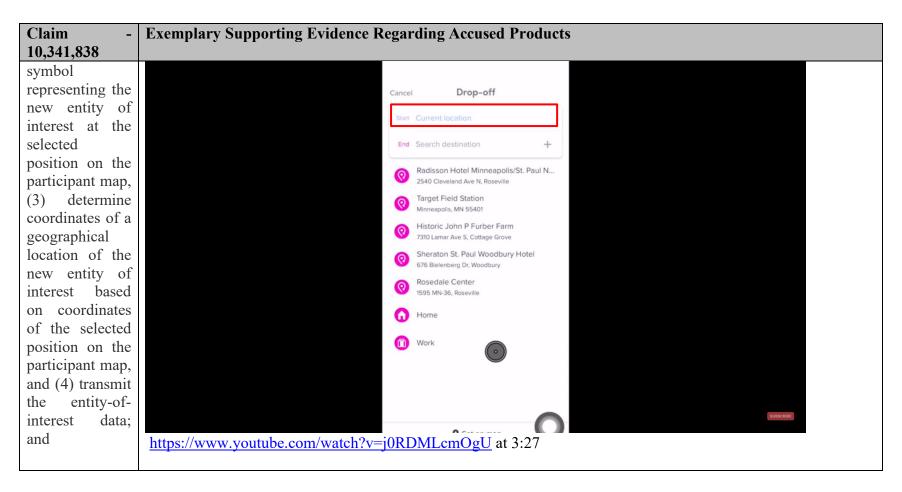
Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
selected from	
the group	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
consisting of:	
sending updated	The Lyft server(s) communicate data based on the rider's user input selections described above. For example, the
	Lyft server(s) communicates location/ride/status data and updates for the driver/vehicle to the passenger/rider. The
	Lyft server(s) also communicates location/ride/status and updates for the rider/passenger to the driver/vehicle. The
device	Lyft server(s) also communicates messages from the rider to the driver as described above. The Lyft server(s) also
corresponding	communicates updated locations to the rider/driver and updated directions/routes to the driver. The Lyft server(s)
to the vehicle,	communications are sent to the Lyft apps for driver and/or rider.
sending updated	
participant data	
to the second	
mobile device	
corresponding	
to the	
participant, and	
sending a	
message to the	
first mobile	
device	
corresponding	
to the vehicle	

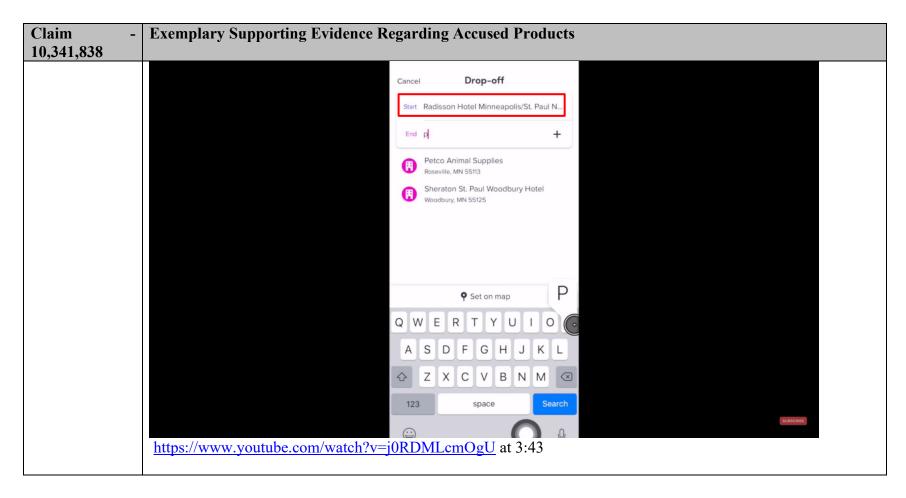


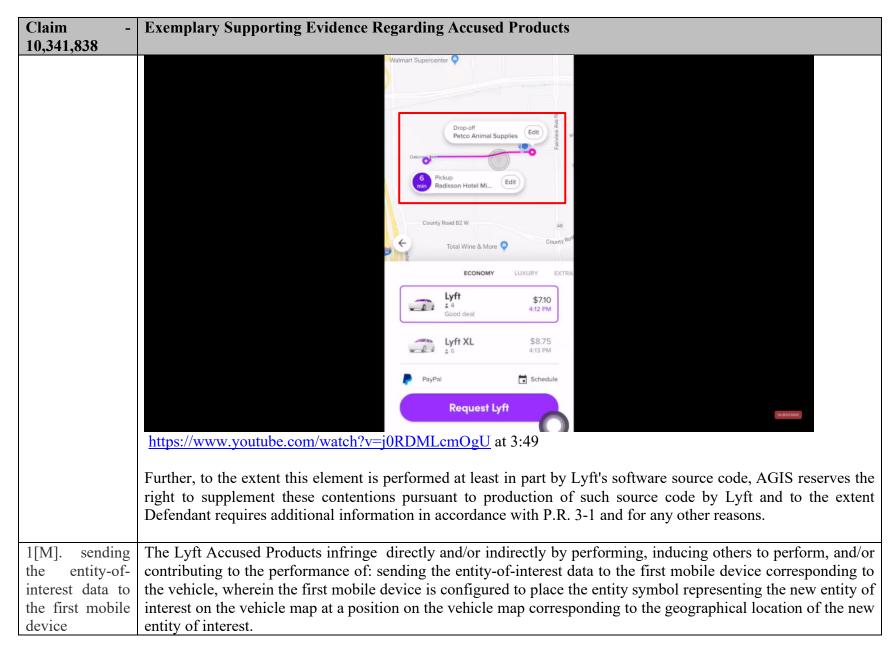




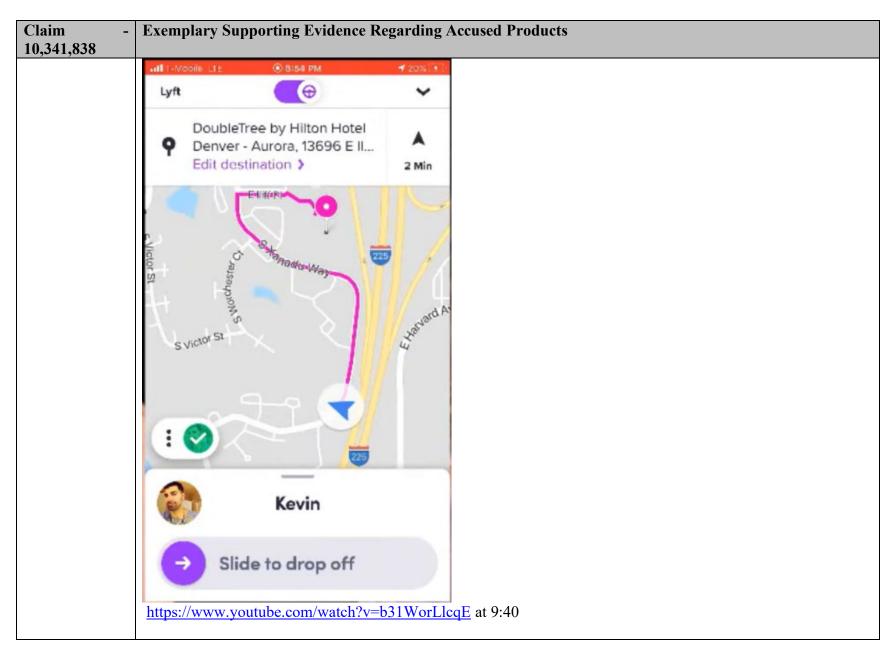
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
mobile device, the entity-of- interest data comprising	interest at the selected position, (2) display an entity symbol representing the new entity of interest at the selected position on the participant map, (3) determine coordinates of a geographical location of the new entity of interest based on coordinates of the selected position on the participant map, and (4) transmit the entity-of-interest data.
coordinates of a geographical	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
location of a new entity of interest, wherein the second mobile device is configured to (1) identify participant interaction with a display of the	The Lyft server(s) performs this limitation because it receives user input data regarding pickups, stops or destinations entered by a user and those pickups, stops or destinations correspond to geographical locations on a map. For example, the Lyft passenger users the Lyft app for riders to select a pickup location and a destination location. The Lyft passenger can add entities of interest and select one or more entities of interest as a pickup or destination. The Lyft passenger can choose the pickup/stop/destination location by entering an address/location/shortcut or by choosing it on a map which will add/enter a symbol on the map and the passenger can change the location of the added/enter symbol to specify the location of the added/entered symbol as a pickup/stop/destination. Each of these methods will cause a symbol corresponding to the pickup/stop/destination to be added/entered on the map at the corresponding location. When the passenger completes this process, data associated with the added/entered symbol as a pickup/stop/destination is communicated to the Lyft server(s). Adding/entering the symbol for a pickup/stop/destination can occur before or during a ride.
second mobile device, the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2) display an entity	The passenger provides the pickup location (current address or any specific location) and the destination when booking a ride using the Lyft app for riders indicating selection of a position on the map and entry of the entity at that position. The Lyft passenger can add a second stop or destination via user input in the Lyft app for riders. The Lyft app for riders receives user input regarding the selected location, displays a symbol on the map and determines the geographical location corresponding to the selected location and its coordinates. The rider is also able to edit or add additional stops/destinations and change the order of stops/destinations. The stops/destinations are displayed on the map using symbols.



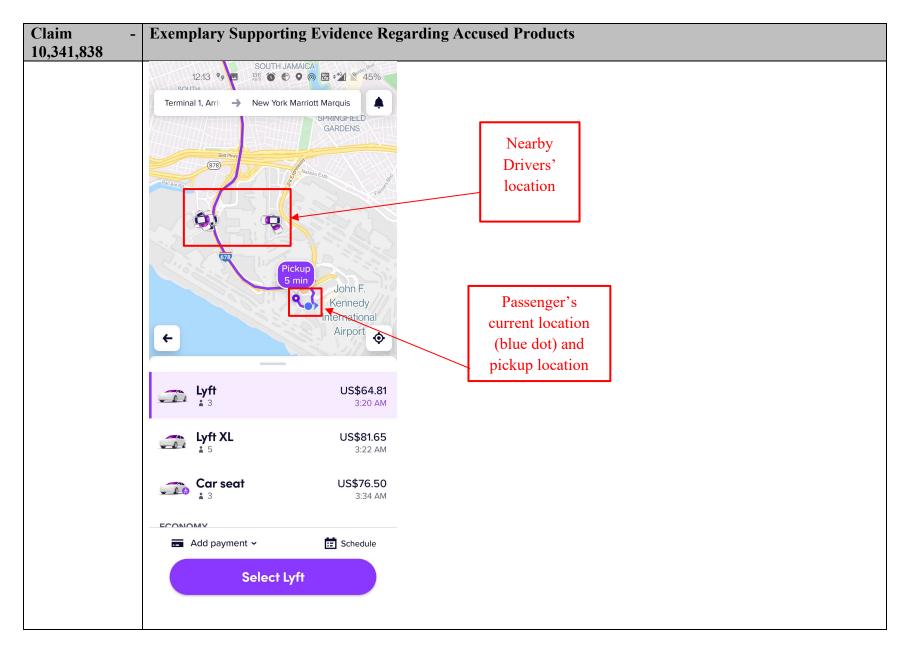


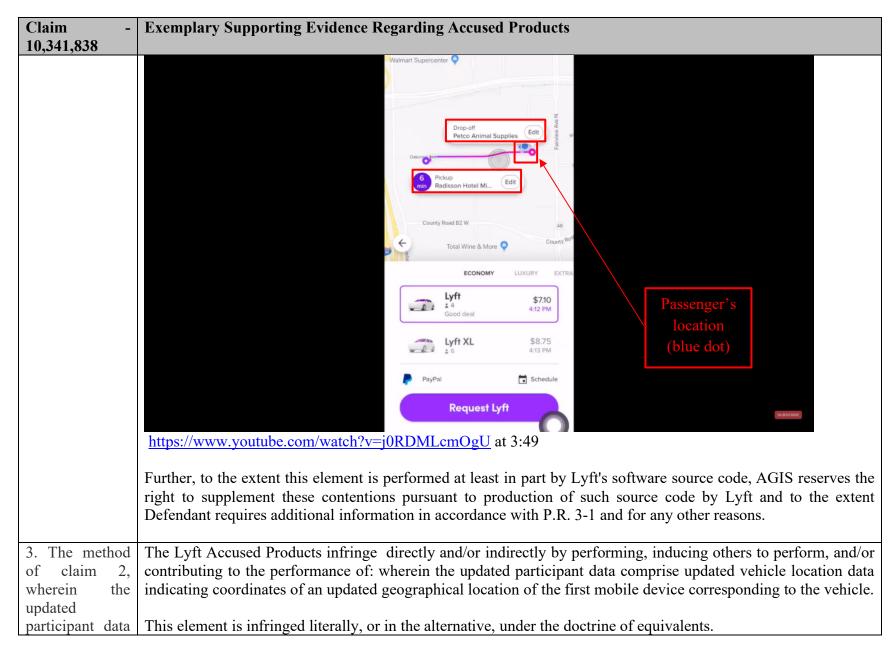


Claim **Exemplary Supporting Evidence Regarding Accused Products** 10,341,838 corresponding to the vehicle, This element is infringed literally, or in the alternative, under the doctrine of equivalents. wherein the first mobile device is The Lyft server(s) performs this limitation because the Lyft server(s) communicate data corresponding to the added/entered pickup/stops/destinations to the Lyft app of the driver and symbols are placed at the geographical configured locations corresponding to the added/entered pickup/destinations/stops. This can occur before or during the place the entity acceptance of the ride. The added/entered symbols are displayed on the map at the Lyft app for drivers. symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding the geographical location of the Petco new entity of interest. 2 min away Accept https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated



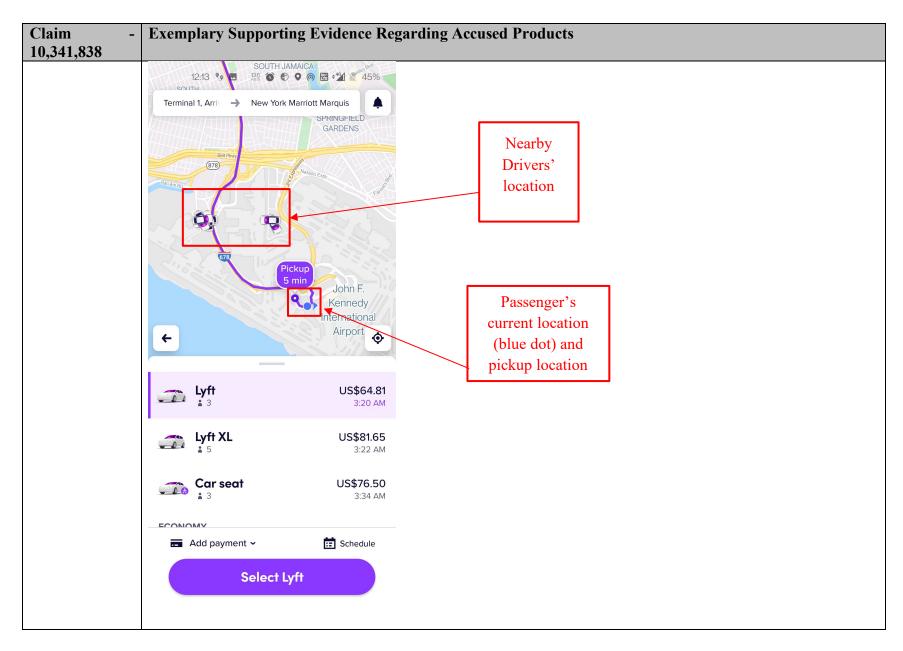
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
2. The method of claim 1, wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to display the updated participant data within the participant map. This element is infringed literally, or in the alternative, under the doctrine of equivalents. See claim 1. The Lyft server(s) meets this limitation because it sends updated driver/vehicle locations to the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app. For example, while the passenger is booking a ride, the server sends the updated current location of the vehicle to the passenger's Lyft app. The updated current location of the vehicle is loaded on the map in the Lyft app. The server also highlights the pickup location and destination address on the map in the Lyft app.
display the updated participant data within the participant map.	



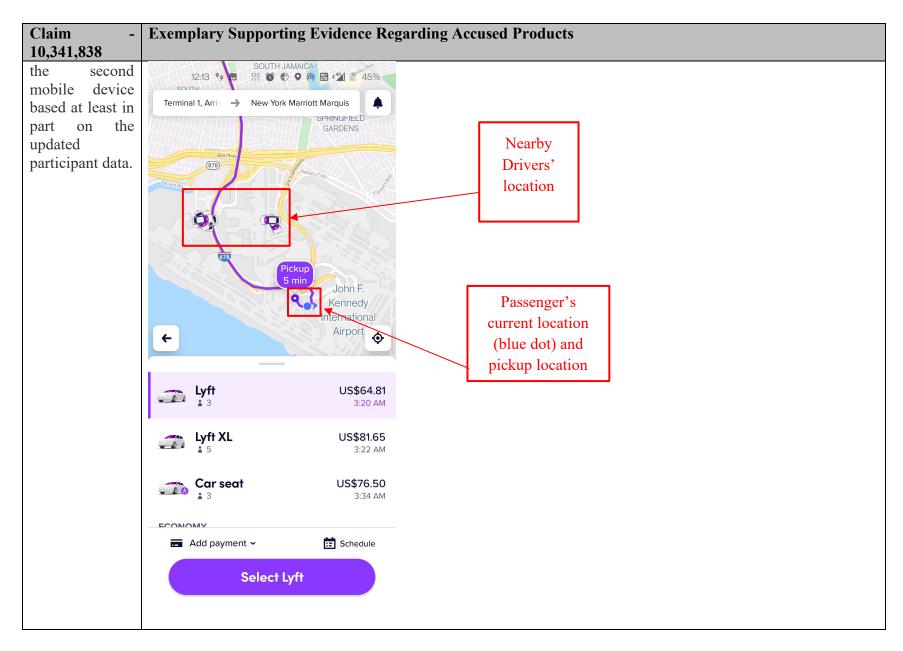


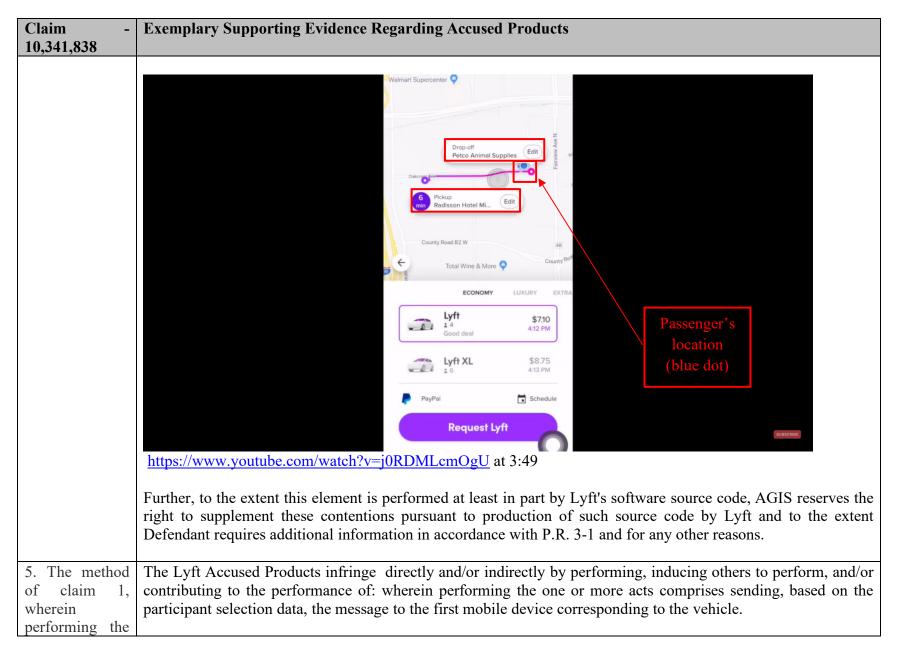
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 209 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
comprise	
updated vehicle	See claims 1 and 2. The Lyft server(s) meets this limitation because it sends updated driver/vehicle locations to
location data	the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app.
indicating	The updated driver/vehicle location is presented on the geographical map at the geographical location. The
coordinates of	geographical location on the map indicates coodinates for the vehicle.
an updated	
geographical	
location of the	
first mobile	
device	
corresponding	
to the vehicle.	

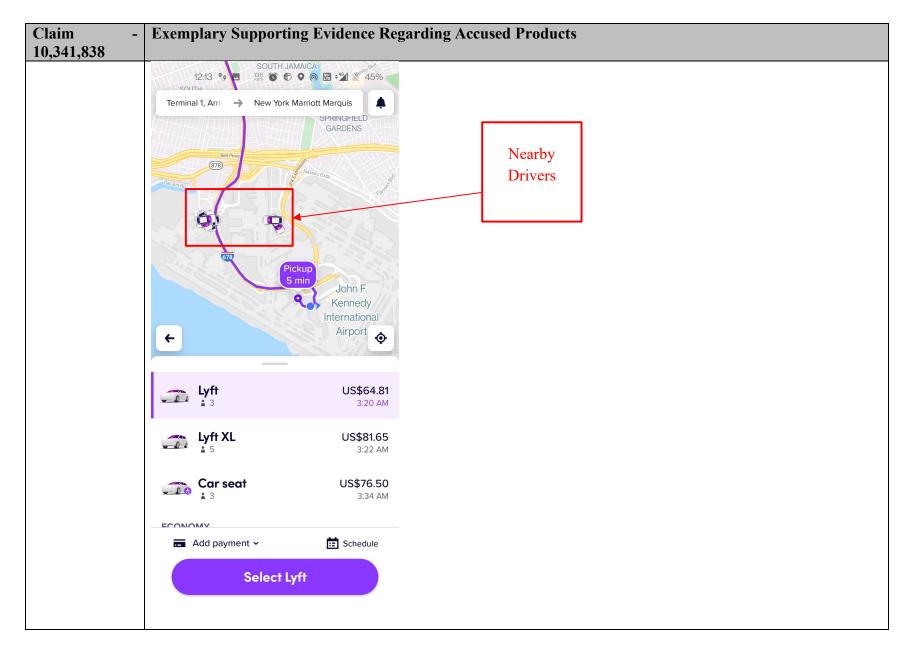


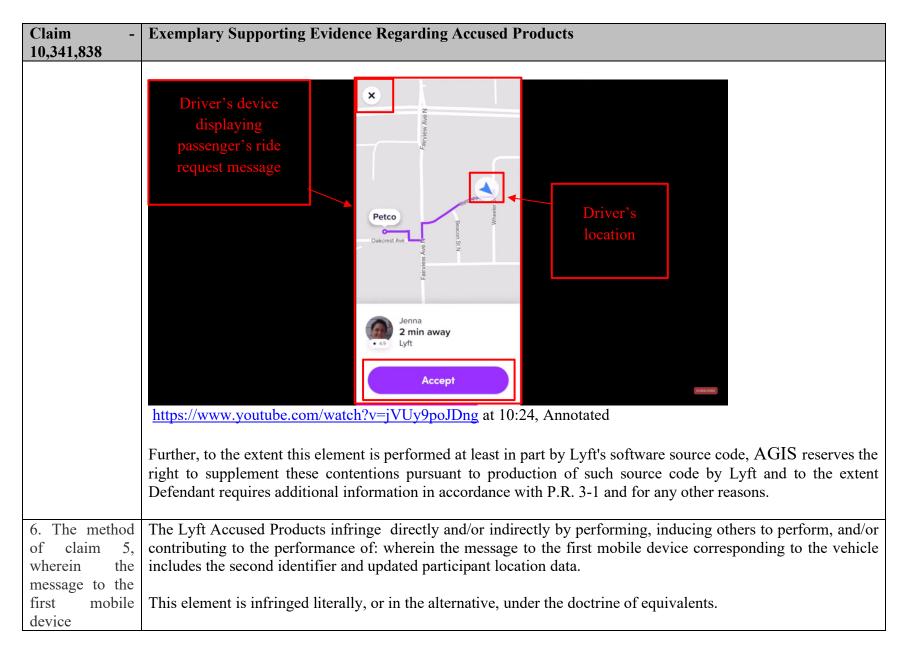
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
4. The method of claim 1, wherein performing the one or more acts comprises	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to replace the participant map with an updated participant map on the display of the second mobile device based at least in part on the updated participant data.
sending, based	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
on the participant selection data, the updated participant data to the second mobile device	See claim 1. The Lyft server(s) meets this limitation because it sends the driver/vehicle locations to the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app. The Lyft server sends updated map data or maps to the Lyft app for riders when a new location requires the presentation of a new map, i.e. when the location is changed or when the user moves/pans/modifies the map or when the user navigates within or outside the Lyft app and returns to the app.
corresponding	
to the participant,	
wherein the	
second mobile device is	
device is configured to	
replace the	
participant map with an updated	
participant map	
on the display of	

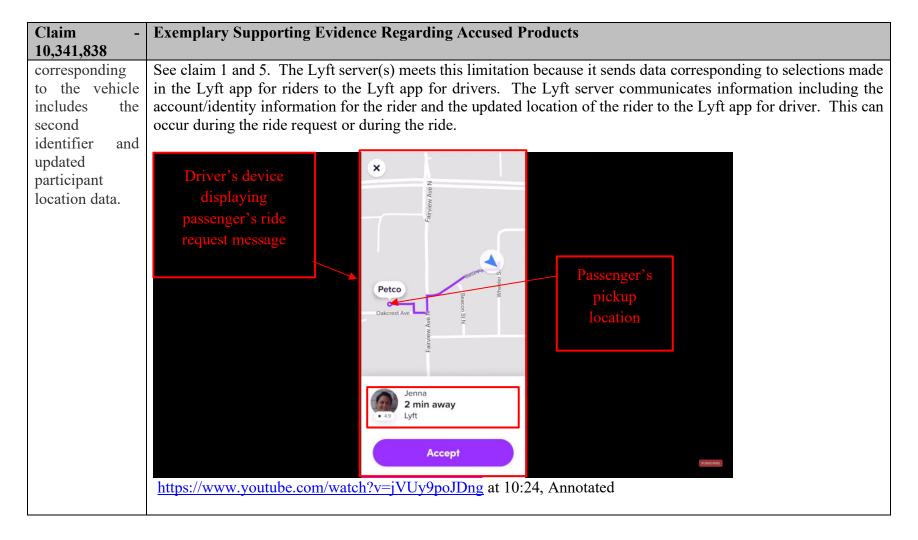




Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
one or more acts	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
comprises	
sending, based	See claim 1. The Lyft server(s) meets this limitation because it sends data corresponding to selections made in the
on the	Lyft app for riders to the Lyft app for drivers. For example, when the passenger books a ride by providing a pickup
participant	location and destination address ("participant selection data"), the server communicates the ride request message
selection data,	to the Lyft apps of the nearby drivers asking them to either accept or decline the ride. In other examples, the Lyft
the message to	server receives selections from the riders's Lyft app before or during a ride and communicates messages to the Lyft
the first mobile	app for drivers.
device	
corresponding	
to the vehicle	



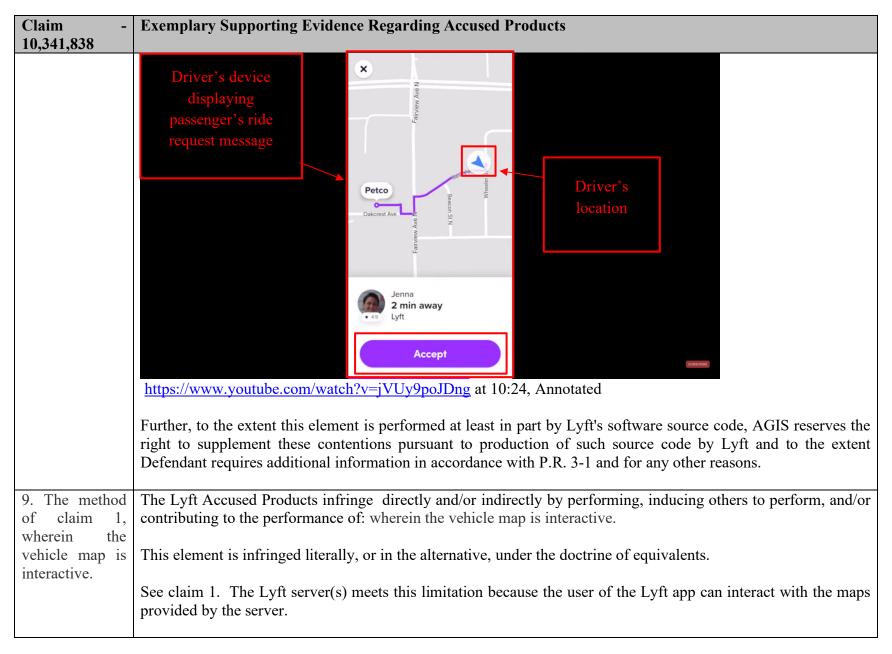




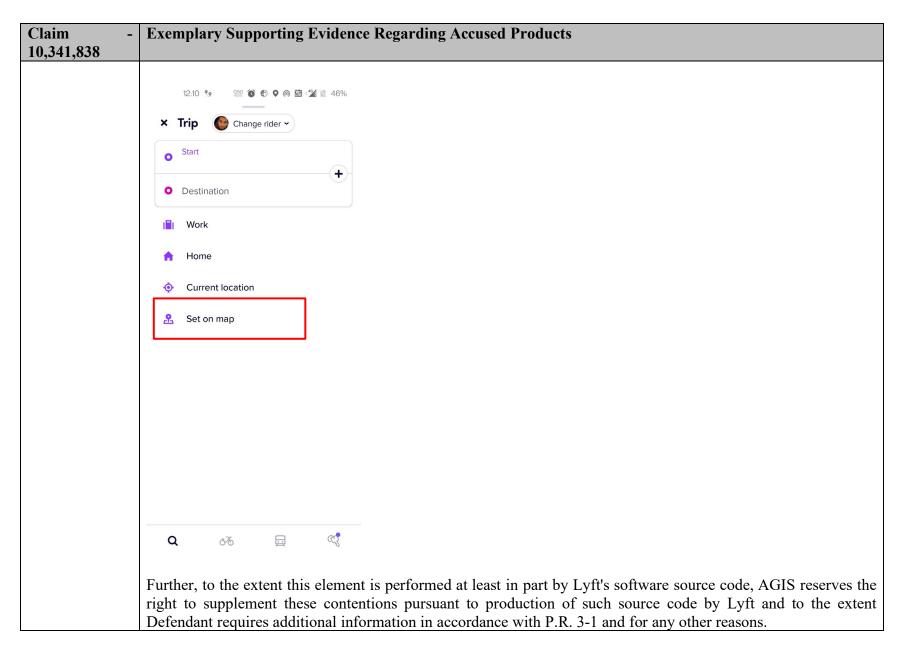
Claim - 10,341,838	Exemplary Supporting Evidence Regarding	Accused Products
	Cancel Start Current loc End Search des	
	2540 Clevelu Target Fiel Minnespolis,	MN 55401
	7310 Lamar A	S. COMMON CO.
	Home Work	
	https://www.youtube.com/watch?v=j0RDMLcr	mOgU at 3:27
	right to supplement these contentions pursuan	at least in part by Lyft's software source code, AGIS reserves the t to production of such source code by Lyft and to the extent cordance with P.R. 3-1 and for any other reasons.
7. The method of claim 1, wherein performing the one or more acts	contributing to the performance of: wherein pe	nd/or indirectly by performing, inducing others to perform, and/or erforming the one or more acts comprises sending, based on the ata to the first mobile device corresponding to the vehicle, wherein the updated vehicle data within the vehicle map.

Claim **Exemplary Supporting Evidence Regarding Accused Products** 10,341,838 This element is infringed literally, or in the alternative, under the doctrine of equivalents. comprises sending, based the See claim 1. The Lyft server(s) meets this limitation because it sends updated rider location to the Lyft app for on drivers and the location is displayed in the Lyft app for drivers. This can occur before or during a ride. For example, participant after the passenger books the ride by providing the pickup address and destination address ("participant selection selection data, data"), the server sends the updated current location of the rider to the driver's Lyft app. Also, the rider can update the updated vehicle data to this selection data or can transmit a new location to the driver's Lyft app for display. the first mobile device corresponding to the vehicle, wherein the first mobile device is configured display the updated vehicle data within the Petco vehicle map. 2 min away Accept https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

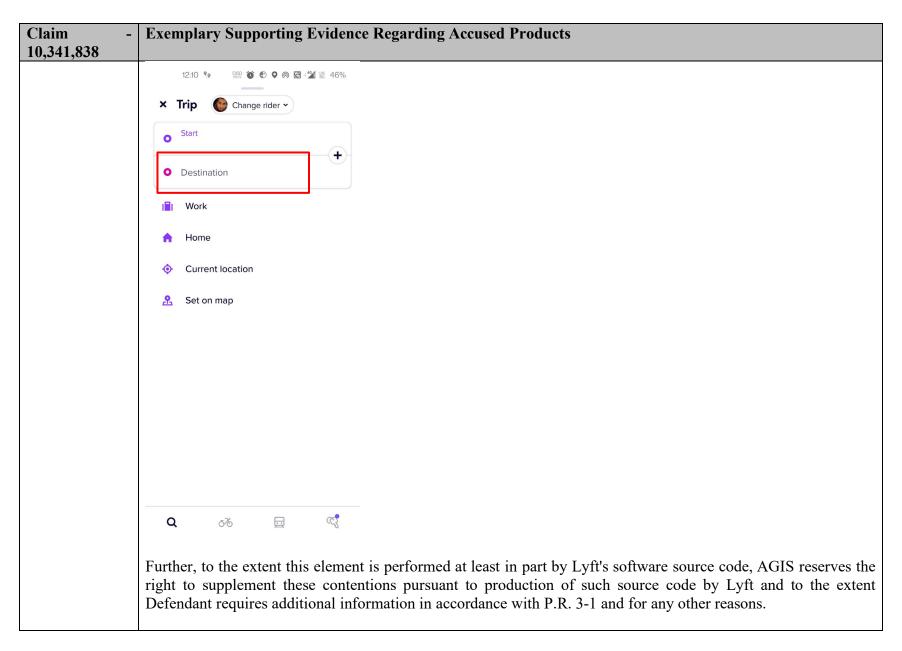
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
8. The method	
of claim 1,	contributing to the performance of: wherein performing the one or more acts comprises sending, based on the
wherein	participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein
performing the	the first mobile device is configured to replace the vehicle map with an updated vehicle map on the display of the
one or more acts	first mobile device based at least in part on the updated vehicle data.
comprises	
sending, based on the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
	See claim 1. The Lyft server(s) meets this limitation because it sends the rider locations to the Lyft app for drivers
participant selection data,	
the updated	and that updated rider location is provided for display to the driver via the Lyft app. The Lyft server sends updated map data or maps to the Lyft app for drivers when a new location requires the presentation of a new map, i.e. when
vehicle data to	the location/route/direction is changed or when the user moves/pans/modifies the map or when the user navigates
the first mobile	within or outside the Lyft app and returns to the app.
device	within or outside the Lyrt app and returns to the app.
corresponding	
to the vehicle,	
wherein the first	
mobile device is	
configured to	
replace the	
vehicle map	
with an updated	
vehicle map on	
the display of	
the first mobile	
device based at	
least in part on	
the updated	
vehicle data.	



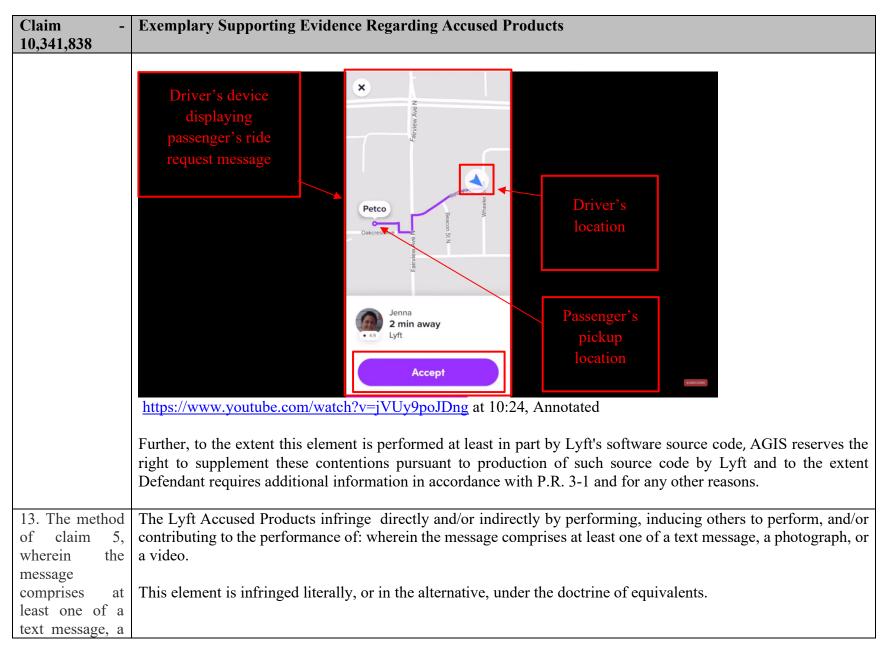
Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
	Petco Oakcrest Ave N 18 John Manual M
	Accept Accept https://www.youtube.com/watch?v=jVUy9poJDng at 10:24
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
10. The method of claim 1, wherein the	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein the participant map is interactive.
participant map is interactive.	This element is infringed literally, or in the alternative, under the doctrine of equivalents. See claim 1. The Lyft server(s) meets this limitation because the user of the Lyft app can interact with the maps provided by the server.

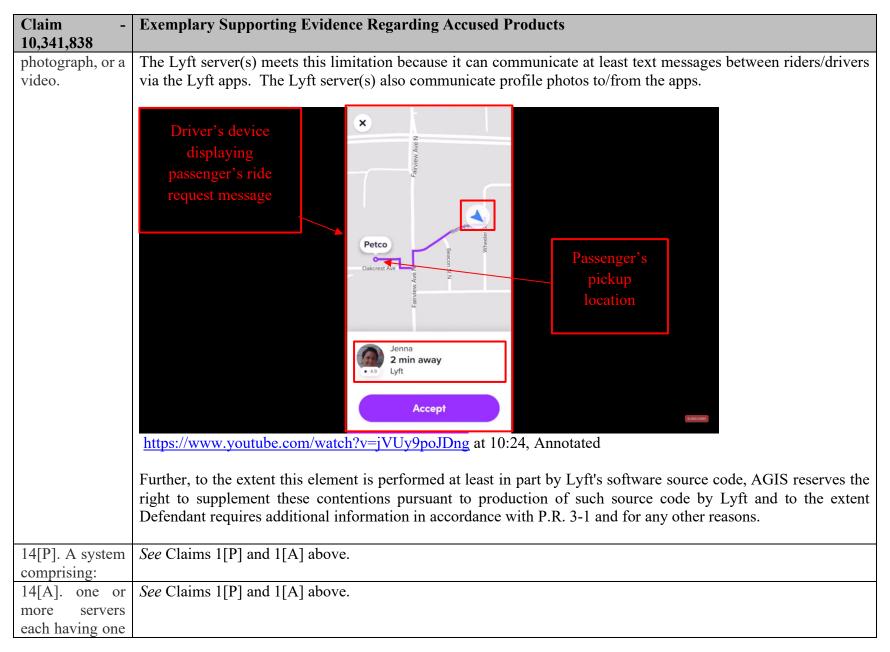


Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
11. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: wherein the new entity of interest is an event and the location of the new entity
wherein the new	of interest is a location of the event.
entity of interest	
is an event and	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
the location of	
the new entity	See claim 1. The Lyft server(s) meets this limitation because the rider can schedule a pickup or ride with a
of interest is a	location using the Lyft app for riders. The Lyft app can also be used to request a ride from a calendar/schedule
location of the	which can include the location. For example, the destination address added by the passenger is a location added
event.	by the passenger before requesting a ride.



Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
12. The method of claim 1, wherein the new entity of interest	
location is different from	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
the locations of the first and second mobile devices.	
devices.	Drop-off Pector Animal Supplies Edit Pector
	Lyft XL \$8.75 4.13 PM (blue dot)
	Request Lyft SUBSCHIE
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 3:49





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 229 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
or more	
processors, the	
processors	
configured to	
execute	
instructions to	
perform	
operations	
comprising:	
14[B].	See Claim 1[B] above.
obtaining first	
data provided	
by a first mobile	
device	
corresponding	
to a vehicle, the	
first data	
including a first	
identifier	
14 [C].	See Claim 1[C] above.
permitting the	
first mobile	
device	
corresponding	
to the vehicle to	
join a	
communication	
network, the	
permitting	
based on a	
determination	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 230 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
regarding the	
first data	
14[D].	See Claim 1[D] above.
obtaining	
second data	
provided by a	
second mobile	
device	
corresponding	
to a participant,	
the second data	
including a	
second	
identifier	
associated with	
the participant	
14[E]. allowing	See Claim 1[E] above.
the second	
mobile device	
corresponding	
to the	
participant to	
join the	
communication	
network, the	
allowing based	
on a	
determination	
regarding the	
second data	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 231 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
14[F]. receiving	See Claim 1[F] above.
vehicle location	
data provided	
by the first	
mobile device	
corresponding	
to the vehicle,	
wherein the	
vehicle location	
data are	
associated with	
the first	
identifier and	
indicate	
coordinates of a	
geographical	
location of the	
first mobile	
device	
14[G].	See Claim 1[G] above.
receiving	
participant	
location data	
provided by the	
second mobile	
device	
corresponding	
to the	
participant,	
wherein the	
participant	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 232 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
location data are	
associated with	
the second	
identifier and	
indicate	
coordinates of a	
geographical	
location of the	
second mobile	
device	
14[H]. sending	See Claim 1[H] above.
participant data	
to the second	
mobile device	
corresponding	
to the	
participant,	
wherein the	
participant data	
comprise the	
vehicle location	
data, wherein	
the second	
mobile device	
corresponding	
to the	
participant is	
configured to	
(1) determine	
coordinates of a	
position on the	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
participant map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
second mobile	
device, (2)	
display the	
participant map,	
and (3) place a	
first symbol on	
the participant	
map at the	
determined	
coordinates of	
the position on	
the participant	
map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
second mobile	
device	
14[I]. sending	See Claim 1[I] above.
vehicle data to	
the first mobile	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 234 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
device	
corresponding	
to the vehicle,	
wherein the	
vehicle data	
comprise the	
participant	
location data,	
wherein the first	
mobile device	
corresponding	
to the vehicle is	
configured to	
(1) determine	
coordinates of a	
position on the	
vehicle map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
first mobile	
device, (2)	
display the	
vehicle map,	
and (3) place a	
second symbol	
on the vehicle	
map at the	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 235 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838 determined	
coordinates of	
the position on	
the vehicle map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
first mobile	
device	
14[J]. receiving	See Claim 1[J] above.
participant	
selection data	
provided by the	
second mobile	
device	
corresponding	
to the	
participant, the	
participant	
selection data	
corresponding	
to user input	
provided via a	
display of the	
second mobile	
device	
14[K]. based on	See Claim 1[K] above.
the participant	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
selection data,	
performing one	
or more acts	
selected from	
the group	
consisting of:	
sending updated	
vehicle data to	
the first mobile	
device	
corresponding	
to the vehicle,	
sending updated	
participant data	
to the second	
mobile device	
corresponding	
to the	
participant, and	
sending a	
message to the	
first mobile	
device	
corresponding	
to the vehicle	
14[L]. receiving	See Claim 1[L] above.
entity-of-	
interest data	
transmitted by	
the second	
mobile device,	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
the entity-of-	
interest data	
comprising	
coordinates of a	
geographical	
location of a	
new entity of	
interest,	
wherein the	
second mobile	
device is	
configured to	
(1) identify	
participant	
interaction with	
a display of the	
second mobile	
device, the	
participant	
interaction	
indicating	
selection of a	
position on the	
participant map	
and entry of the	
new entity of	
interest at the	
selected	
position, (2)	
display an entity	
symbol	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
representing the	
new entity of	
interest at the	
selected	
position on the	
participant map,	
(3) determine	
coordinates of a	
geographical	
location of the	
new entity of	
interest based	
on coordinates	
of the selected	
position on the	
participant map,	
and (4) transmit	
the entity-of-	
interest data;	
and	
14[M]. sending	See Claim 1[M] above.
the entity-of-	
interest data to	
the first mobile device	
corresponding to the vehicle,	
wherein the first	
mobile device is	
configured to	
place the entity	
prace the chility	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 239 of 1092

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
symbol	
representing the	
new entity of	
interest on the	
vehicle map at a	
position on the	
vehicle map	
corresponding	
to the	
geographical	
location of the	
new entity of	
interest.	
15. The system	See Claim 2 above.
of claim 14,	
wherein	
performing the	
one or more acts	
comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
participant data	
to the second	
mobile device	
corresponding	
to the	
participant,	
wherein the	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
second mobile	
device is	
configured to	
display the	
updated	
participant data	
within the	
participant map.	
16. The system	See Claim 3 above.
of claim 15,	
wherein the	
updated	
participant data	
comprise	
updated vehicle	
location data	
indicating	
coordinates of	
an updated	
geographical	
location of the	
first mobile	
device	
corresponding	
to the vehicle.	
17. The system	See Claim 4 above.
of claim 14,	
wherein	
performing the	
one or more acts	
comprises	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
sending, based	
on the	
participant	
selection data,	
the updated	
participant data	
to the second	
mobile device	
corresponding	
to the	
participant,	
wherein the	
second mobile	
device is	
configured to	
replace the	
participant map	
with an updated	
participant map	
on the display of	
the second	
mobile device	
based at least in	
part on the	
updated	
participant data.	
18. The system	See Claim 5 above.
of claim 14,	
wherein	
performing the	
one or more acts	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 242 of 1092

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
comprises	
sending, based	
on the	
participant	
selection data,	
the message to	
the first mobile	
device	
corresponding	
to the vehicle.	
19. The system	See Claim 6 above.
of claim 18,	
wherein the	
message to the	
first mobile	
device	
corresponding	
to the vehicle	
includes the	
second	
identifier and	
updated	
participant	
location data.	
20. The system	See Claim 7 above.
of claim 14,	
wherein	
performing the	
one or more acts	
comprises	
sending, based	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 243 of 1092

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
, ,	
participant	
selection data,	
the updated	
vehicle data to	
the first mobile	
device	
corresponding	
to the vehicle,	
wherein the first	
mobile device is	
configured to	
display the	
updated vehicle	
data within the	
vehicle map.	
21. The system	See Claim 8 above.
of claim 14,	
wherein	
performing the	
one or more acts	
comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
vehicle data to	
the first mobile	
device	
corresponding	

Claim -	Exemplary Supporting Evidence Regarding Accused Products
10,341,838	
to the vehicle,	
wherein the first	
mobile device is	
configured to	
replace the	
vehicle map	
with an updated	
vehicle map on	
the display of	
the first mobile	
device based at	
least in part on	
the updated	
vehicle data.	
22. The system	See Claim 9 above
of claim 14,	
wherein the	
vehicle map is	
interactive.	
	See Claim 10 above.
of claim 14,	
wherein the	
participant map	
is interactive.	
24. The system	See Claim 11 above.
of claim 14,	
wherein the new	
entity of interest	
is an event and	
the location of	
the new entity	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 245 of 1092

Claim - 10,341,838	Exemplary Supporting Evidence Regarding Accused Products
of interest is a	
location of the	
event.	
	See Claim 12 above.
of claim 14,	
wherein the new	
entity of interest	
location is	
different from	
the locations of	
the first and	
second mobile	
devices.	
26. The system	See Claim 13 above.
of claim 18,	
wherein the	
message	
comprises at	
least one of a	
text message, a	
photograph, or a	
video.	

Based on information presently available, AGIS Software Development LLC ("AGIS") contends that Defendant Lyft Technologies Inc. (collectively "Lyft" or "Defendant") infringes claims 9, 12-16 (the "Asserted Claims") of U.S. Patent No. 7,630,724 (the "'724 Patent") through the Accused Products, Services which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise all versions of the Lyft Application made, used, sold, offered for sale, or otherwise provided, after September 21, 2004. For example, the Accused Products comprise the Lyft application installed on all Android, iOS, Blackberry, and Windows Mobile based mobile devices (*e.g.* smartphones, tablets, laptops, and smart watches), and any variants thereof. AGIS reserves the right to amend this list of Accused Products as discovery progresses.

Lyft directly infringes each of the Asserted Claims by using, importing, testing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. On information and belief, Lyft knows that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

On information and belief, the charted version of the Lyft application is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android, iOS, Blackberry, and Windows Mobile operating systems.

AGIS does not concede that any claims of the '724 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its Accused Products. Accordingly, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS. Furthermore, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including, but not limited to, positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

The contents of every below claim cell on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

¹ The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. No. 205 (Lead Case) (E.D. Tex. Oct. 10, 2018) and *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. No. 147 (Lead Case) (E.D. Tex. Dec. 20, 2020). AGIS reserves the right to update its constructions and contentions in view of this Court's claim construction order.

Claim - 7,630,724

comprising:

9[P]. A method for providing a cellular phone communication network for designated participating users, each user having a similarly equipped cellular phone that includes a CPU, GPS navigational system, an interact message transmitter and receiver and a touch screen display

Exemplary Supporting Evidence Regarding Lyft's Accused Products

The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method for providing a cellular phone communication network for designated participating users, each user having a similarly equipped cellular phone that includes a CPU, GPS navigational system, an interact message transmitter and receiver and a touch screen display.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel.

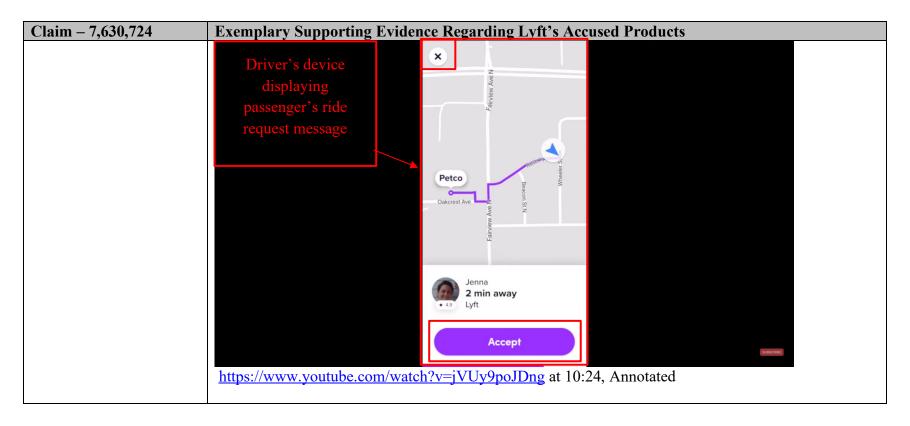
. Each of the driver and the passenger's mobile phones which are installed with the Lyft and Lyft driver apps comprises a CPU, GPS, a navigational system symbol generator (Lyft App and Lyft Driver App) and a touch screen display. The Lyft and Lyft Driver application is supported by smart devices including but not limited to smartphones and tablets, which have an antenna in them for both transmission and reception.

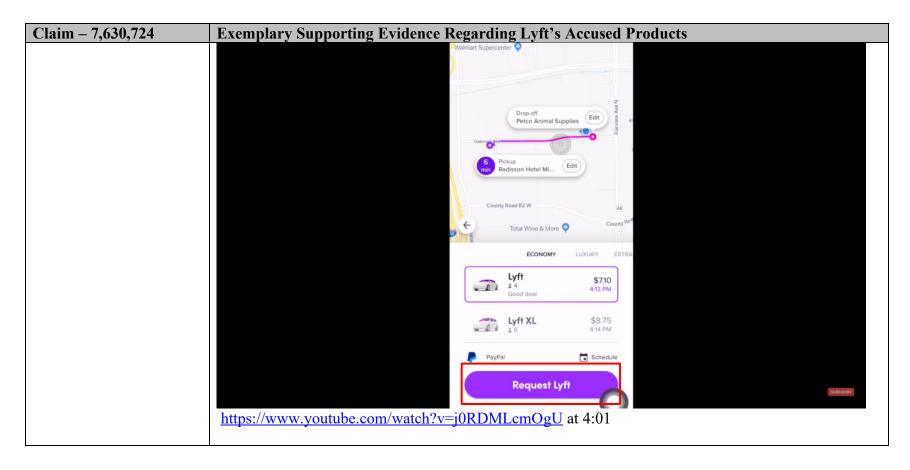
Lyft Driver app

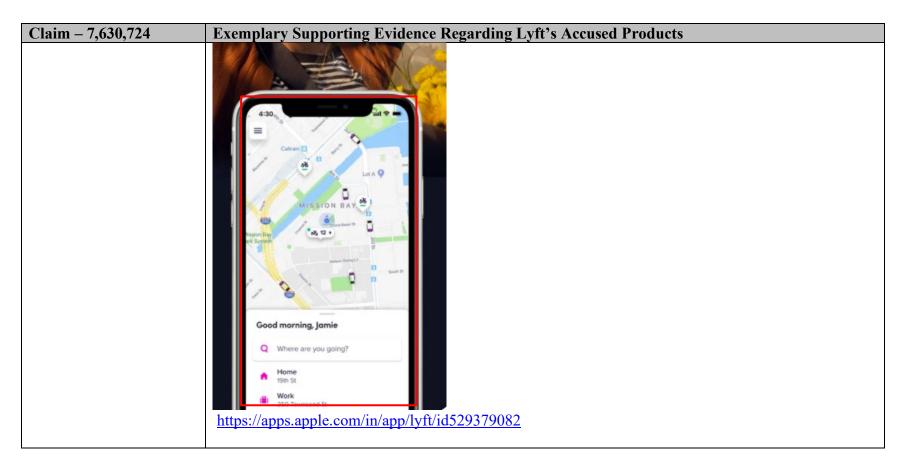
We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).

The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.

Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	2:30 PM Calacrotene Arts freatre 1 Standard 1 Standar
	Go online
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride







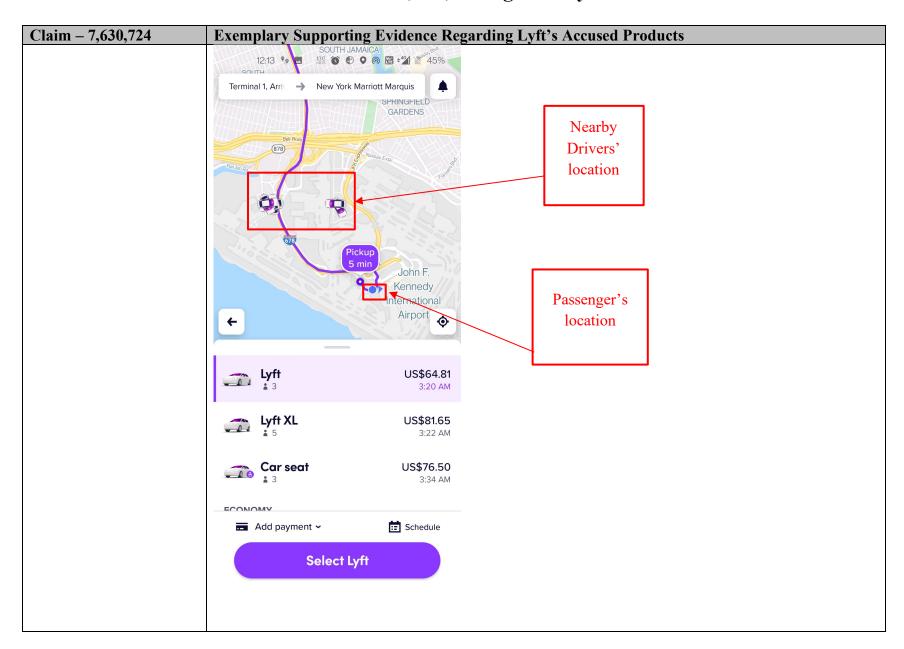
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Combining multiple components into a single chip saves on space, cost, and power consumption.
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating
	system to detecting when you press the power off button. SoCs connect to other components too,
	such as cameras, a display, RAM, flash storage, and much more.
	The list below contains the most common components that you will find inside a smartphone System-on-a-Chip. We're going to cover a few of the most important ones later on in this article.
	· Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the Android OS and most of your apps.
	 Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an app's user interface and 2D/3D gaming.
	 Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files.
	 Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a CPU. Includes decompressing music files and analyzing gyroscope sensor data.
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine learning (AI) tasks. These include voice recognition and camera processing.
	 Video encoder/decoder — Handles the power-efficient conversion of video files and formats.
	 Modems — Converts wireless signals into data your phone understands. Components include 4G LTE, 5G, WiFi, and Bluetooth modems.
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/

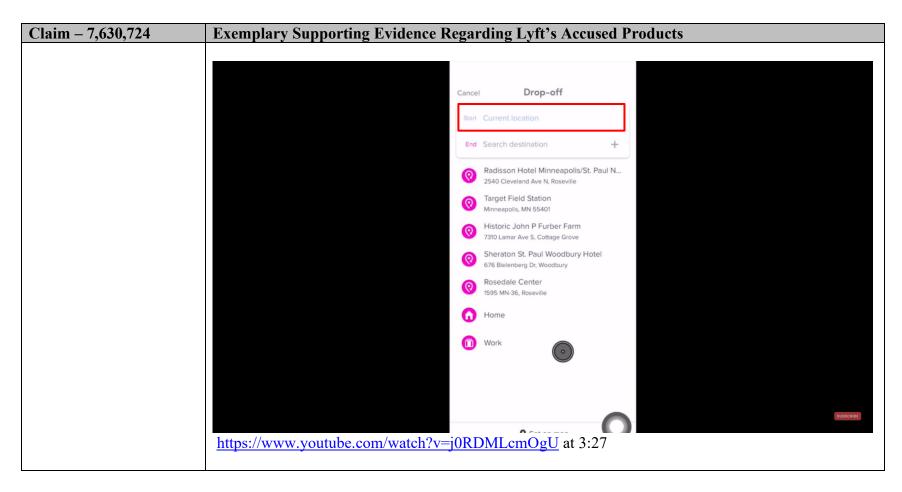
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	You must have seen that every Android and iOS device in today's age comes with
	GPS right inside it. This is one feature that will be there in every smartphone no
	matter what the price of that device might be. And that is because of the fact that
	GPS is the most basic yet most useful feature on every smartphone.
	Just for information, the GPS stands for Global Positioning System and it provides
	accurate geolocation and time information for every equipment that is equipped
	with a GPS receiver. Now, the best example of using GPS is with services such as
	Google Maps, Apple Maps, and others where you can see where exactly you are right
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS
	satellite.
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device

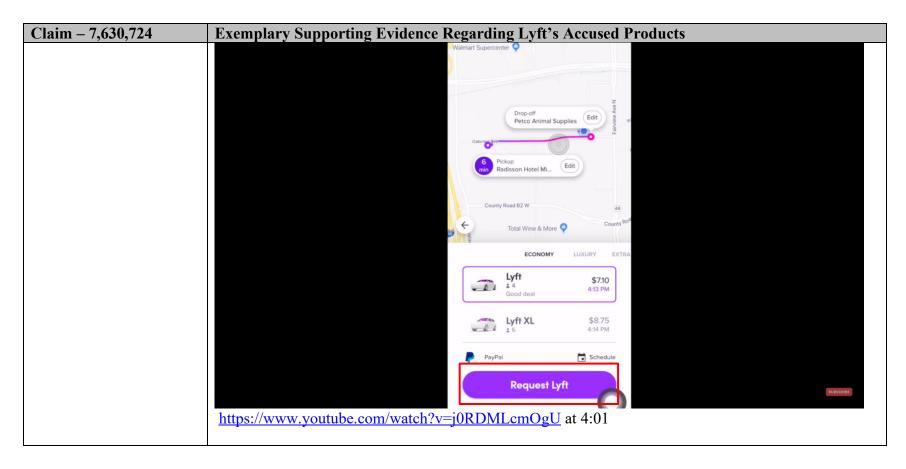
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Mobile phone contents
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone:
	Radio frequency - receiver and transmitter
	Digital signal processing
	Analogue / digital conversion
	Control processor
	SIM or USIM card
	Power control and battery
	https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
9[A] accessing a database in each cell phone that includes a geographical map of a predetermined area for user viewing on	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a database in each cell phone that includes a geographical map of a predetermined area for user viewing on the touch screen display.
the touch screen display;	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 256 of 1092

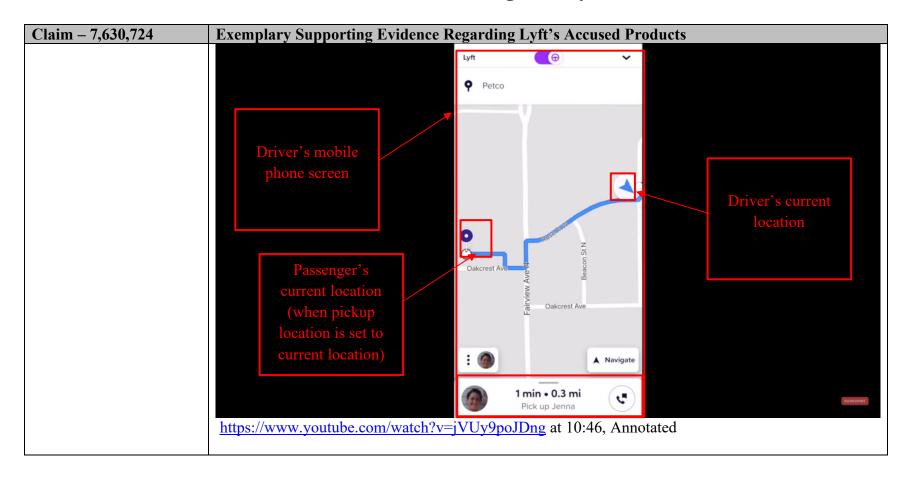
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	For example, in the Lyft app for passengers, the passenger will receive a geographical location on the map on the display of their mobile phone. The geographical map is accessed through the database of the Lyft app. Through this geographical map, the passenger is able to make a ride request to a particular location and see the location of different nearby drivers before making the request and viewing the location of the driver after a driver accepts the passenger's ride request.
	For example, in the Lyft driver app, the driver will receive a geographical map of their location, which is accessed through the database of the Lyft driver application. Through this app, the driver is able to see the location of the rider, when the ride request message of the passenger is broadcasted with the passenger's pickup location (provided pickup location is set to the current location by the passenger).

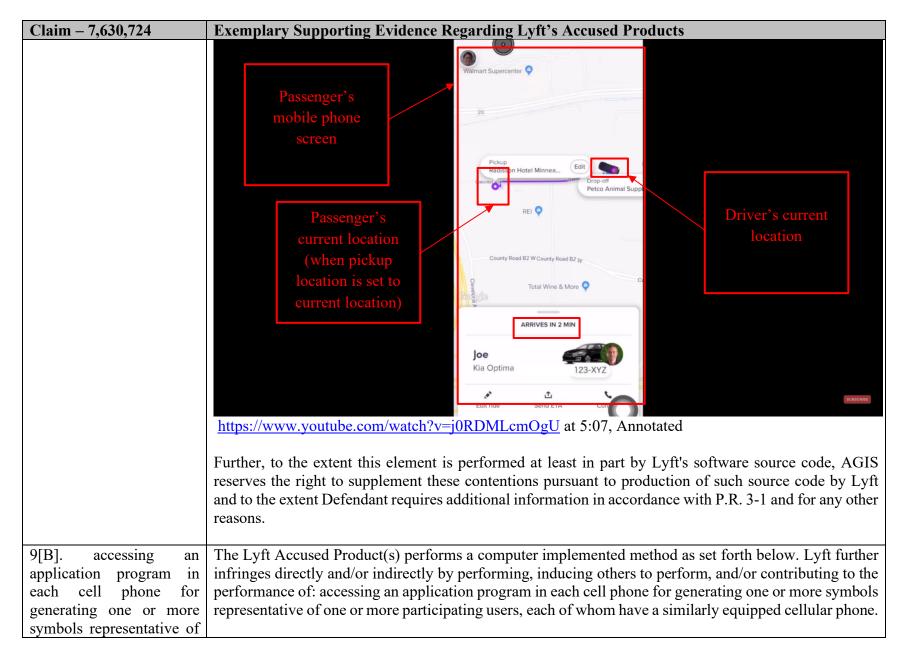






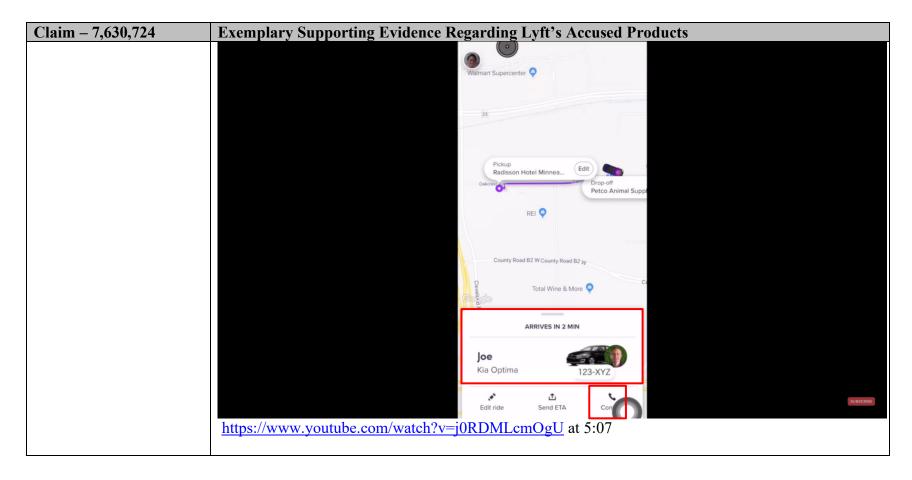


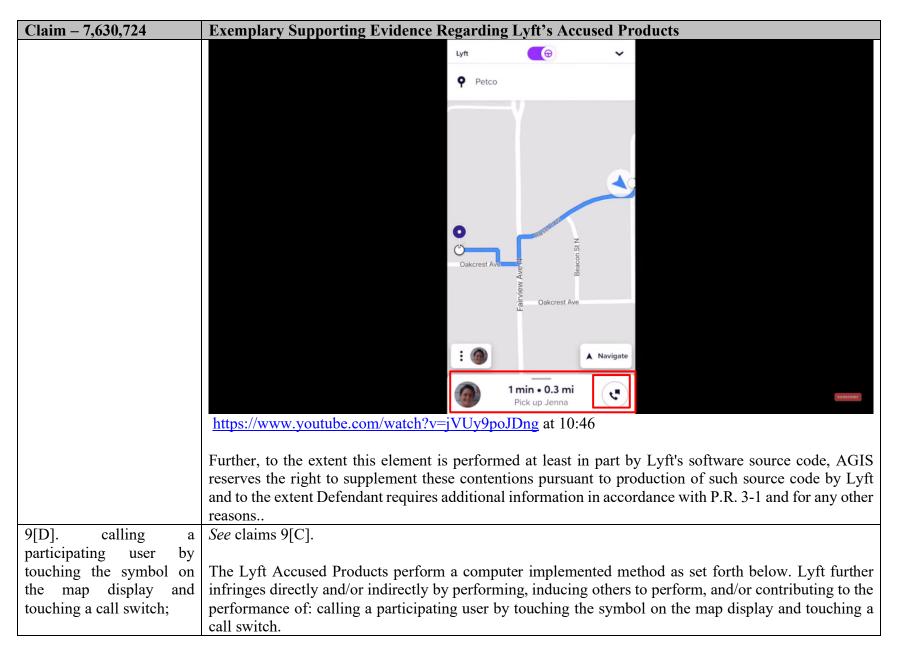




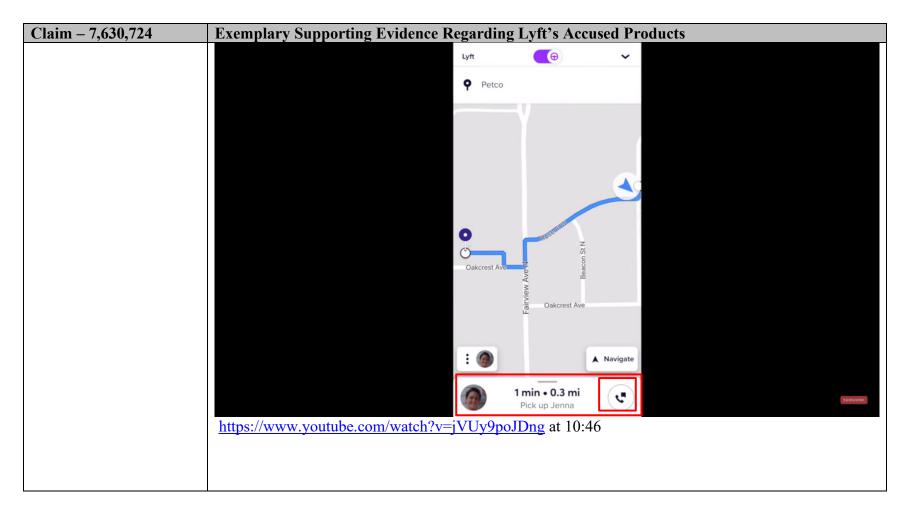
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
one or more participating	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
users, each of whom have	
a similarly equipped	For example, Lyft app displays symbols on the screen representing the passenger as well as the driver's
cellular phone;	vehicle.
	((·))
	Walmart Supercenter 🌣
	Visional Supercenter •
	28
	Radisson Hotel Minnea Edit
	Petco Animal Suppli
	REI 🗖
	County Road B2 W County Road B2 W
	Co
	<u>ී ද</u> ේඛ්ය
	ARRIVES IN 2 MIN
	Joe San Control of the Control of th
	Kia Optima 123-XYZ
	AND SCHOOL STATE OF THE STATE O
	Edit ride Send ETA Con
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:07
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS
	reserves the right to supplement these contentions pursuant to production of such source code by Lyft
	and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other
	reasons.

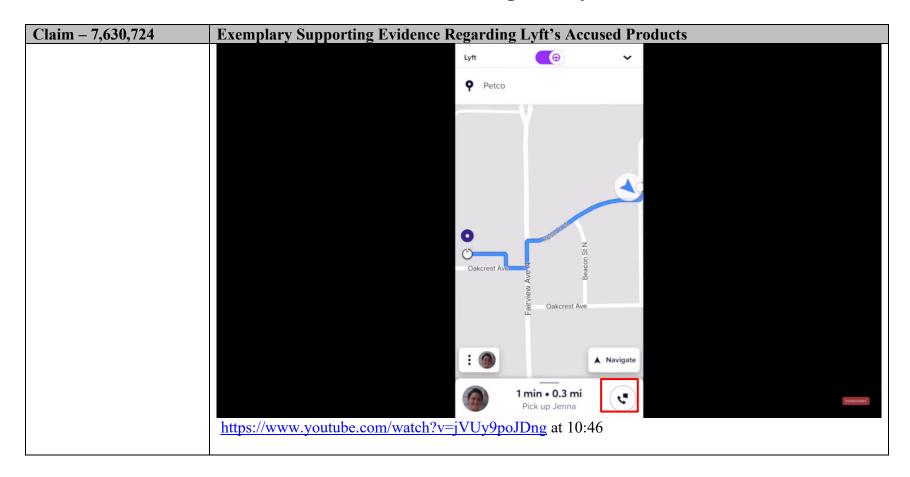
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
9[C]. accessing a database in each cell phone that includes cellular telephone numbers of each of the participating users having similarly equipped cellular phones, said database	infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a database in each cell phone that includes cellular telephone numbers of each of the participating users having similarly equipped cellular phones, said database including the
including the generation of one or more symbols associated with a particular participating user;	The Lyft apps meet this limitation because they access the cellular telephone numbers of the riders/drivers of the Lyft platform/network. On information and belief, the telephone numbers are stored on one or more databases either locally or remotely on a Lyft server(s) for access by the Lyft apps. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon ("rapid voice initiation and communication") on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.

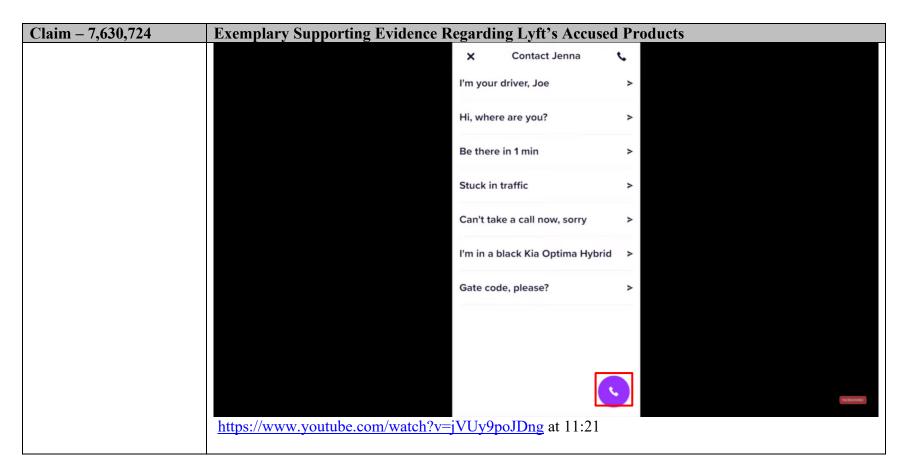


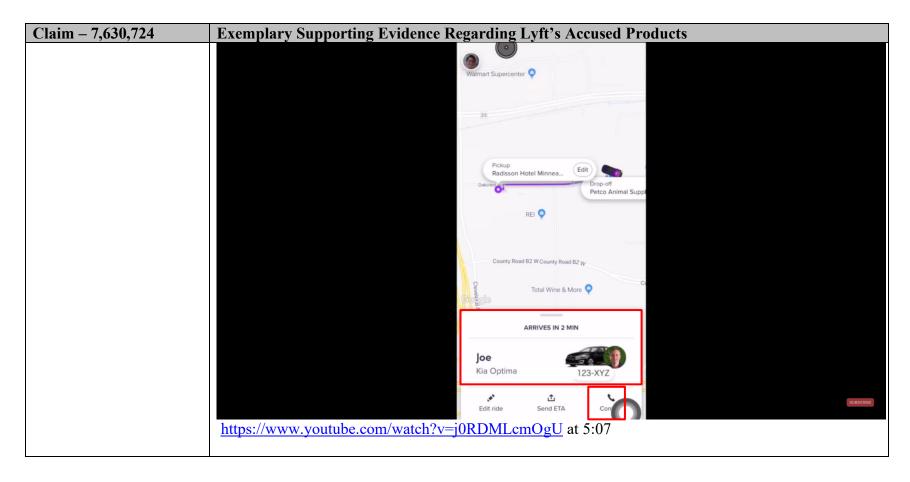


Claim – 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	This element is infringed literally, or in the alternative, under the doctrine of equivalents. The Lyft apps meet this limitation because provide selectable interface elements on the Lyft application for calling drivers/riders. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon ("rapid voice initiation and communication") on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.
	Pickup Radisson Hotel Minnea Discress VI Petco Animal Supple
	Total Wine & More O ARRIVES IN 2 MIN Joe Kia Optima 123-XYZ
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:07





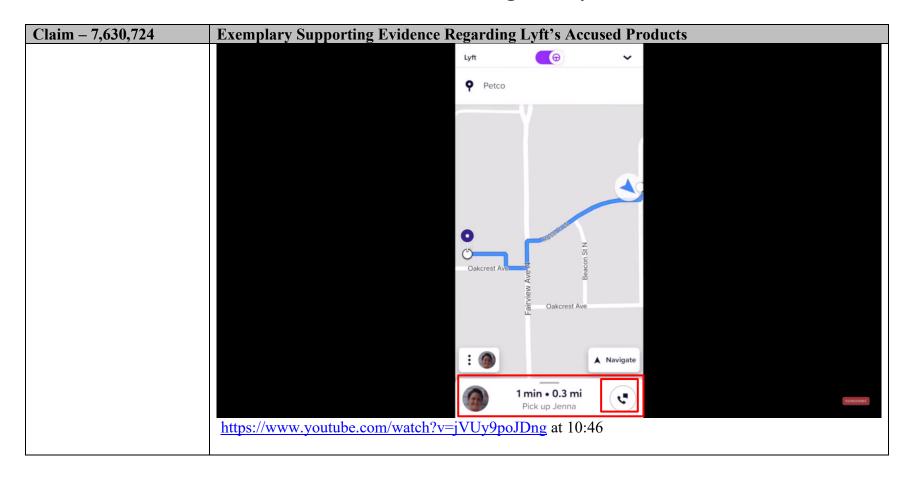


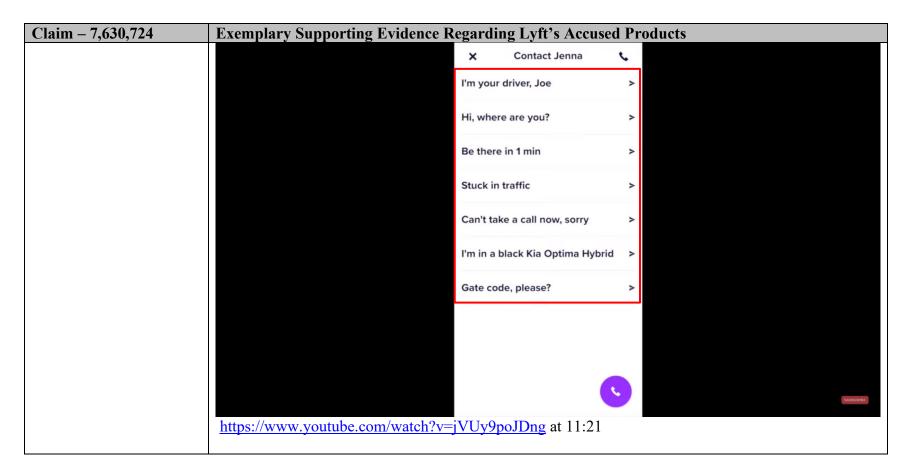


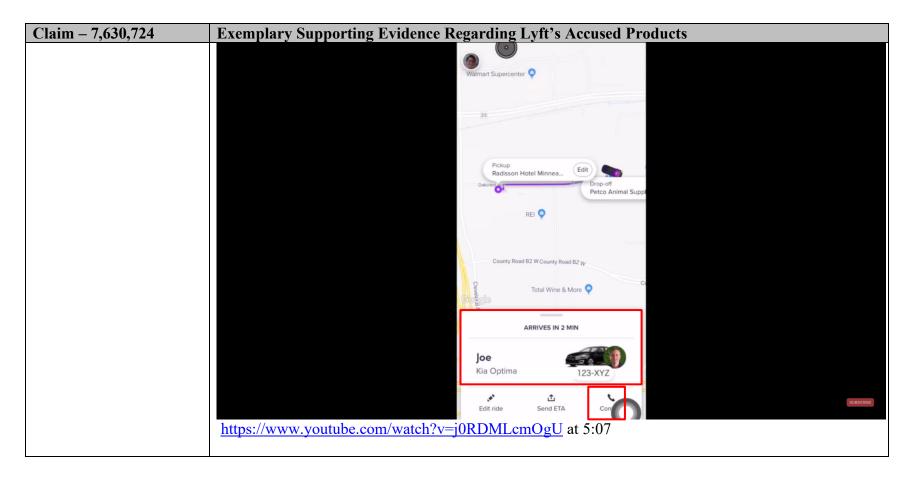
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Contact Joe
	Be aware that they are driving and may not answer immediately
	Call
	Text message
	Cancel
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:32
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
9[E]. connecting each of the cell phones to an internet connection;	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: connecting each of the cell phones to an internet connection.

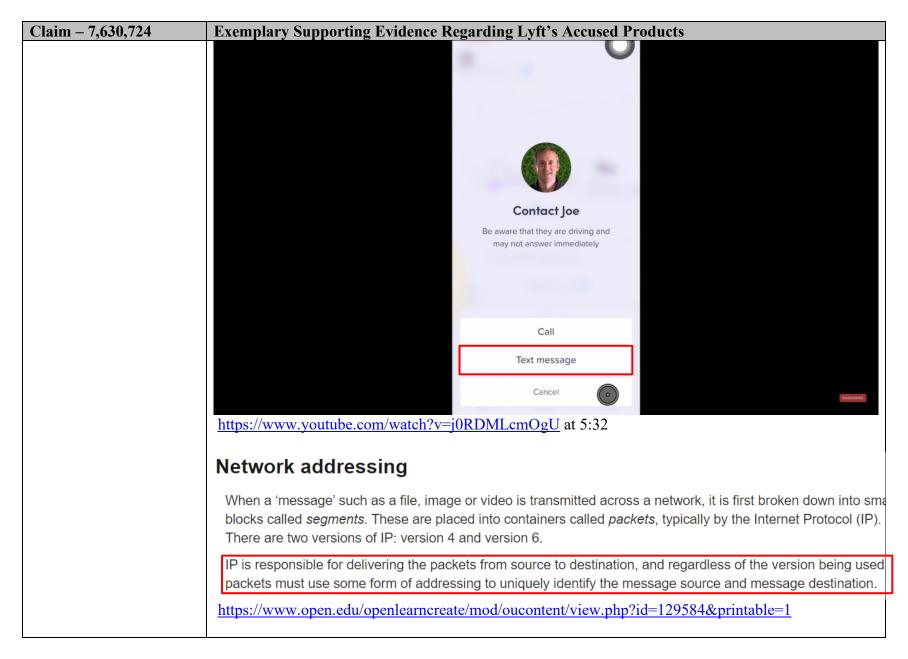
Claim – 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
	For example, when passengers and drivers access the Lyft and Lyft driver apps respectivelywhich are connected to an IP based connection for them to use the Lyft platform (Lyft and Lyft Driver app).
	Mobile data settings
	The app must receive data through your mobile network to work. The app will become unresponsive if this setting is turned off. Here are some resources:
	iOS:
	Head to Apple Support to learn how to check your cellular data usage.
	Android:
	To update the mobile data settings:
	1. Tap 'Settings' on your phone's menu
	2. Tap 'Applications'
	3. Select the app on the list
	4. Select 'Mobile Data'
	5. Tap 'Restrict Background Data'
	6. Make sure it isn't toggled to 'Always' https://help.lyft.com/hc/e/articles/115013080508-Phone-software-recommendations-and-settings
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

Claim – 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
9[F]. exchanging IP	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to
addresses using SMS or	perform, and/or contributing to the performance of: exchanging IP addresses using SMS or other digital
other digital message	message format between and among each of the network participant users so that communications
format between and	between participants is established via IP or transmission of a network participant's IP address to a server
among each of the	which then transmits data to other network participants using the IP address previously.
network participant users	
so that communications	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
between participants is	
established via IP or	On information and belief, the Lyft apps meet this limitation because the Lyft apps transmit data
transmission of a network	(including their IP addresses) to the Lyft server(s) which then communicates data to the other rider/driver.
participant's IP address to	Alternatively, on information and belief, the Lyft apps communicate IP addresses via the Lyft server(s)
a server which then	while communicating data between riders/drivers.
transmits data to other	
network participants using	
the IP address previously.	



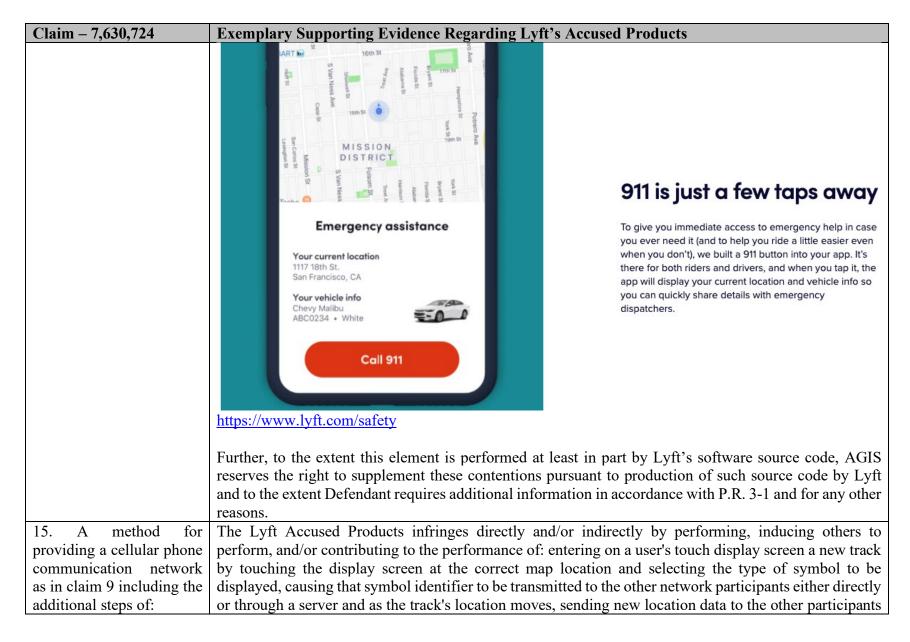






Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
12. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: adding a new cell phone	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: adding a new cell phone participant into a communication network of participating users by having the new cell phone participant transmit an identifier, a cell phone number and an IP address in an initial message to other participant users or to a server for retransmission of the data other network participants.
participant into a communication network of participating users by having the new cell phone participant transmit an identifier, a cell phone number and an IP address in an initial message to other participant users or to a server for	This element is infringed literally, or in the alternative, under the doctrine of equivalents. Lyft meets this limitation because riders/drivers add their account/identity information which includes their cell phone number. Additionally, when using the Lyft app, IP based communication to the Lyft server(s) includes IP addresses. For example, Lyft's servers provide shared rides where multiple passengers can share a ride using the Lyft app. Through this app, Lyft's servers add new passengers into the network in which a driver and a passenger may already be present. This new passenger has a cell phone number and IP address associated with their account which is used to match the new passenger with the already existing driver and passenger.
retransmission of the data other network	Sharing your ride
participants.	Our goal for Shared rides is to fill the empty seats in cars with riders going in the same direction. Chaining brings us one step closer to achieving that goal by pairing multiple parties together in one ride.
	It's important that you only request Shared rides for one or two riders and accurately choose the number of people in the app. If you don't follow this rule, the driver will be prompted to cancel your ride upon arrival.
	https://help.lyft.com/hc/e/articles/115013078848-About-Shared-rides

Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
13. A method for	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to
providing a cellular phone	perform, and/or contributing to the performance of: sending each participating user directly or to a server
communication network	for retransmission the geographic location of the sender of a message.
as in claim 9 including the additional steps of:	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
sending each participating	This element is infiniged inerally, of in the alternative, under the doctrine of equivalents.
user directly or to a server	Lyft meets this limitation because riders/drivers add their account/identity information which includes
for retransmission the	their cell phone number. Additionally, when using the Lyft app, IP based communication to the Lyft
geographic location of the sender of a message.	server(s) includes IP addresses. For example, upon information and belief, Lyft's servers continuously fetch the location information of all the passengers and the driver present in a ride. Therefore, even when a passenger sends a message to the driver, the geographic location is retransmitted from their
	phone.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
14. A method for providing a cellular phone communication network as in claim 9 including the additional steps of:	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: automatically calling the nearest fixed location from a particular group including: police stations, fire stations, or EMTs or other fixed locations by one or more of the cellular phone network participants.
automatically calling the nearest fixed location	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
from a particular group	For example, Lyft provides an emergency button to its passengers which allows Lyft to automatically
including: police stations,	place a 911 call to the nearest fixed location such as a police station.
fire stations, or EMTs or	
other fixed locations by	
one or more of the cellular	
phone network	
participants.	



Claim - 7,630,724

entering on a user's touch display screen a new track by touching the display screen at the correct map location and selecting the type of symbol to be displayed, causing that symbol identifier to be transmitted to the other network participants either directly or through a server and as the track's location moves, sending new location data to the other participants relative to the new track so that each of the participating user's display is updated with the new track's position.

Exemplary Supporting Evidence Regarding Lyft's Accused Products

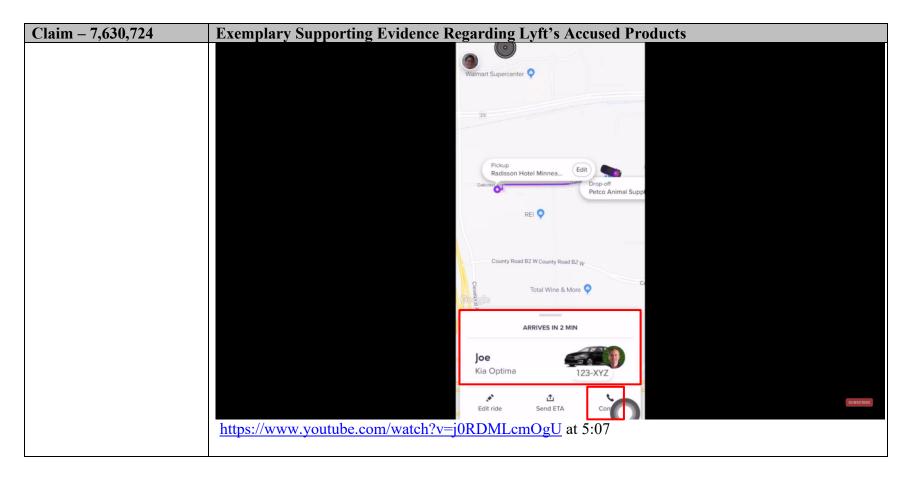
relative to the new track so that each of the participating user's display is updated with the new track's position.

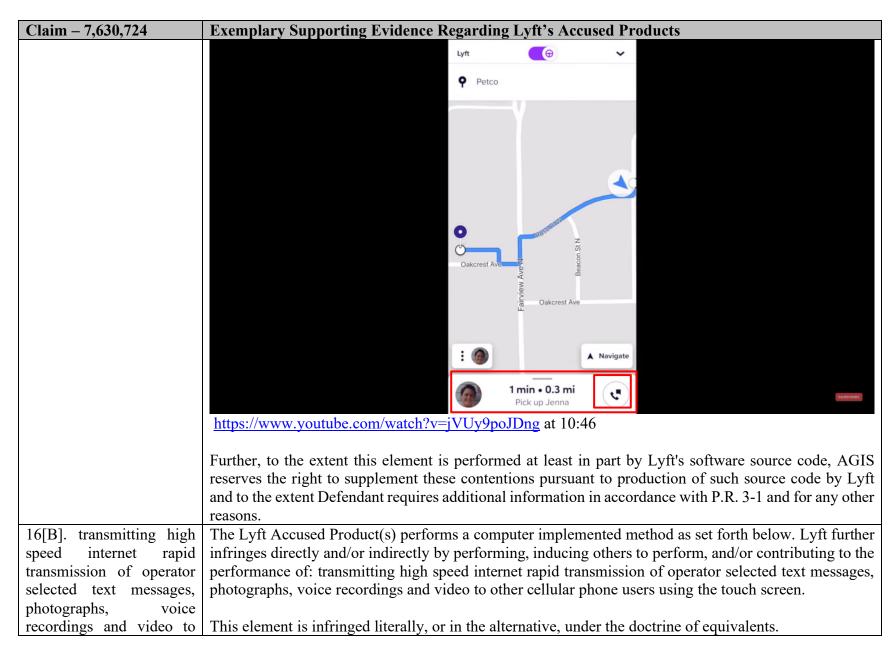
This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, upon information and belief, Lyft allows passengers to change the destination address while executing a ride. As a result, the new location is transmitted to the co-passengers and the driver on their mobile devices. Further, a new symbol is displayed for the new location selected by the passenger.

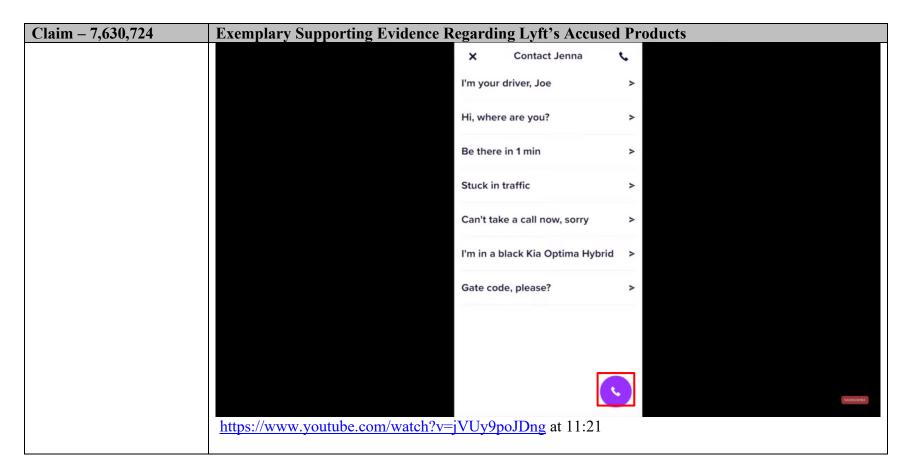


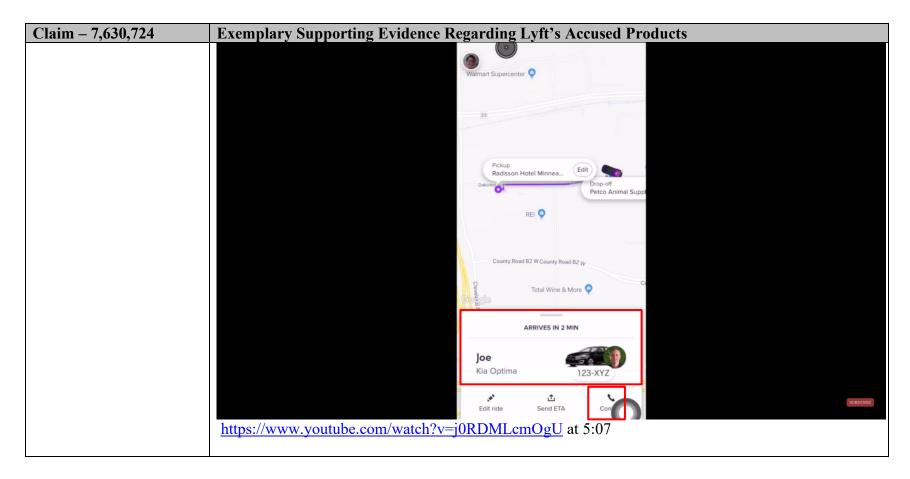
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
16[P]. A method of providing a cellular phone communication network for designated participating users, each having a similarly equipped PDA cellular phone that includes a CPU, a GPS navigational system and a touch screen display comprising: 16[A]. selecting an icon that establishes rapid	See claim 9A above The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the
voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by	performance of: selecting an icon that establishes rapid voice call initiation and communication to the users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch screen. This element is infringed literally, or in the alternative, under the doctrine of equivalents.
touching their symbol on the phone's a touch screen;	Lyft meets this limitation because riders/drivers are provided with the functionality of selectable interface elements for calling the drivers/riders. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon ("rapid voice initiation and communication") on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.





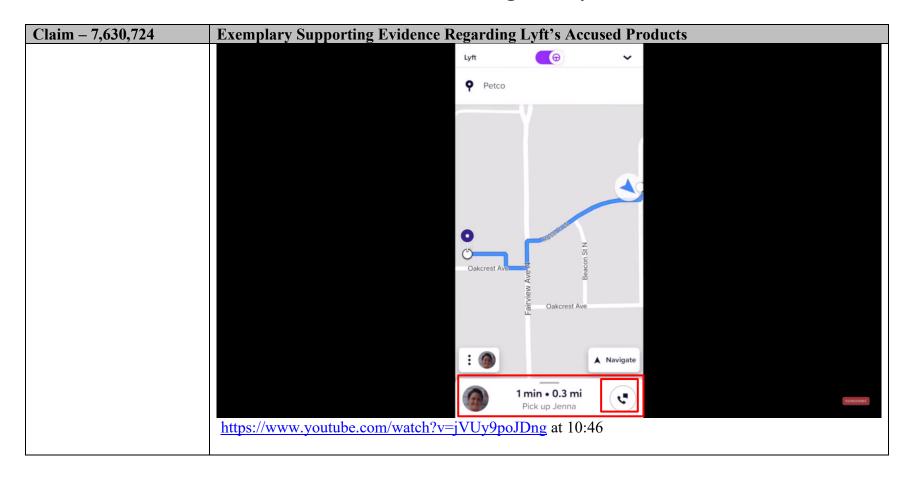
Exemplary Supporting Evidence Regarding Lyft's Accused Products
Lyft meets this limitation because the riders/drivers, via the Lyft apps, are provided with the functionality of communicating messages to drivers/riders using selectable interface elements on the display. On information and belief, the messages include text, voice, and/or video. On information and belief, the messages can be transmitted over IP based communications.
For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.
Lyft 🔾 🔾
♀ Petco
1 min • 0.3 mi Pick up Jenna https://www.youtube.com/watch?v=jVUy9poJDng at 10:46

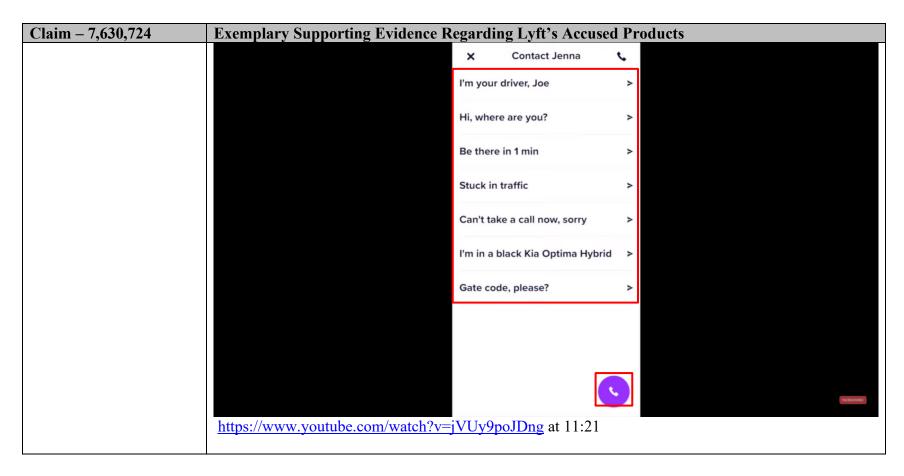


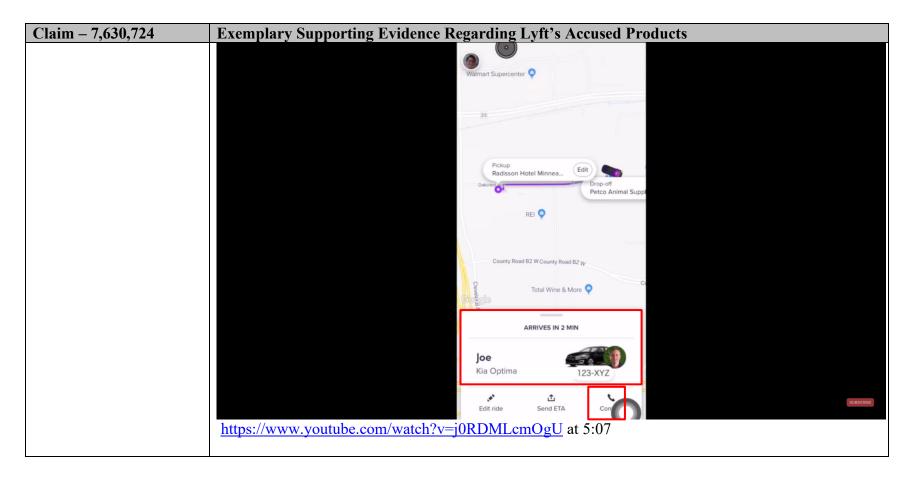


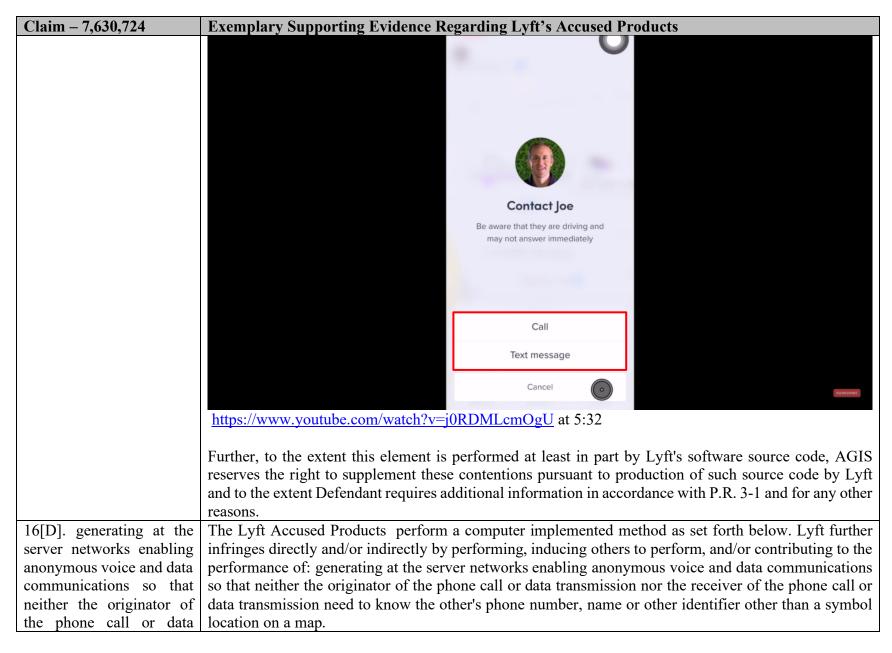
Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Contact Joe Be aware that they are driving and may not answer immediately
	may not answer immediately
	Call
	Text message
	Cancel
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:32
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
16[C]. accessing a server for establishing high speed internet communications between said cellular	The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a server for establishing high speed internet communications between said cellular phone network users and said server.
phone network users and said server; and	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Lyft meets this limitations because the riders/drivers, via the Lyft apps, use IP based communications to/from Lyft server(s). For example, when the passenger requests a ride from the Lyft app installed on their mobile phone, the ride request message is broadcasted to the nearby drivers who are online on the Lyft driver app. For example, when the driver accepts the ride request of the passenger, the passenger's mobile phone receives the driver's information such as name, location, and driver's photo. After the passenger and the driver match, both of them get the option ("icon") to text and call ("low speed communication") each other.
	Driver's device displaying passenger's ride request message Petco Petco
	Passenger's profile photo and name Jenna 2 min away Lyft Accept
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated









Claim - 7,630,724	Exemplary Supporting Evidence Regarding Lyft's Accused Products
transmission nor the receiver of the phone call or data transmission need	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
to know the other's phone number, name or other identifier other than a symbol location on a map.	Lyft meets this limitation because the Lyft server(s) is an intermediary between riders/drivers using their respective Lyft apps for communication of data. On information and belief, communications between riders/drivers do not require knowledge of the drivers/riders' identity or phone number. For example, upon information and belief, Lyft hides the personal phone numbers of the driver as well as the passenger when a call is placed by either the driver or passenger Therefore, Lyft's servers generate an anonymous voice and data communication where both participants do not see their phone numbers.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

Based on information presently available, AGIS Software Development LLC ("AGIS") contends that Defendant Lyft Inc. (collectively "Lyft" or "Defendant") infringes claims 1-31 (the "Asserted Claims") of U.S. Patent No. 10,299,100 (the "'100 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise all versions of the Lyft Application made, used, sold, offered for sale, or otherwise provided, after September 21, 2004. For example, the Accused Products comprise the Lyft application installed on all Android, iOS, Blackberry, and Windows Mobile based mobile devices (*e.g.* smartphones, tablets, laptops, and smart watches), and any variants thereof. AGIS reserves the right to amend this list of Accused Products as discovery progresses.

Lyft directly infringes each of the Asserted Claims by using, importing, testing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. On information and belief, Lyft knows that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

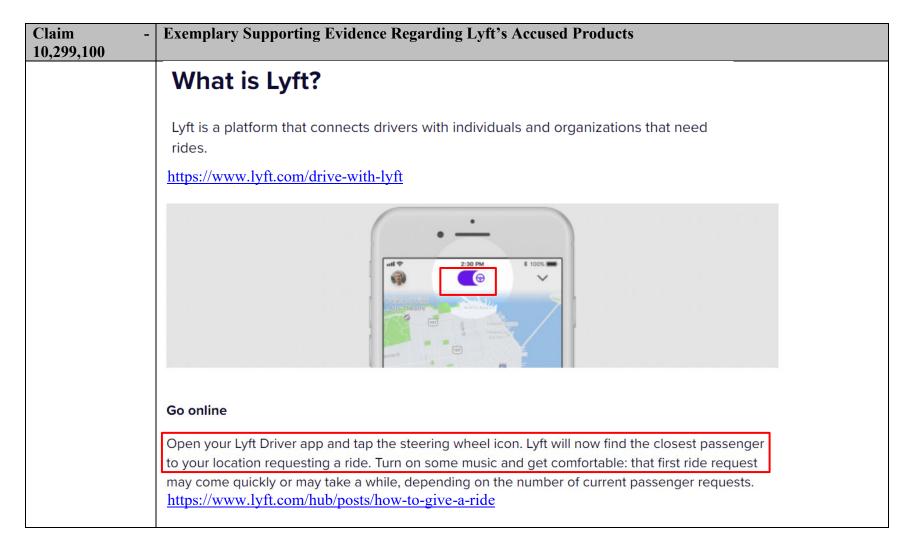
On information and belief, the charted version of the Lyft application is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android, iOS, Blackberry, and Windows Mobile operating systems.

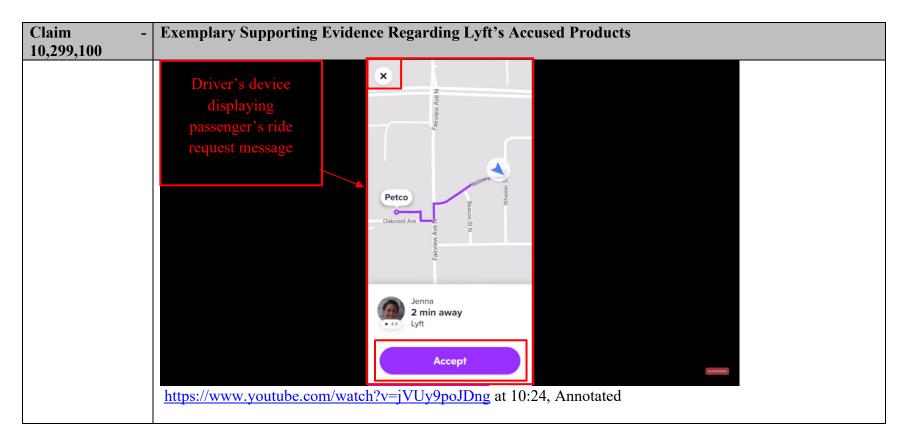
AGIS does not concede that any claims of the '100 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its Accused Products. Accordingly, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS. Furthermore, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including, but not limited to, positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

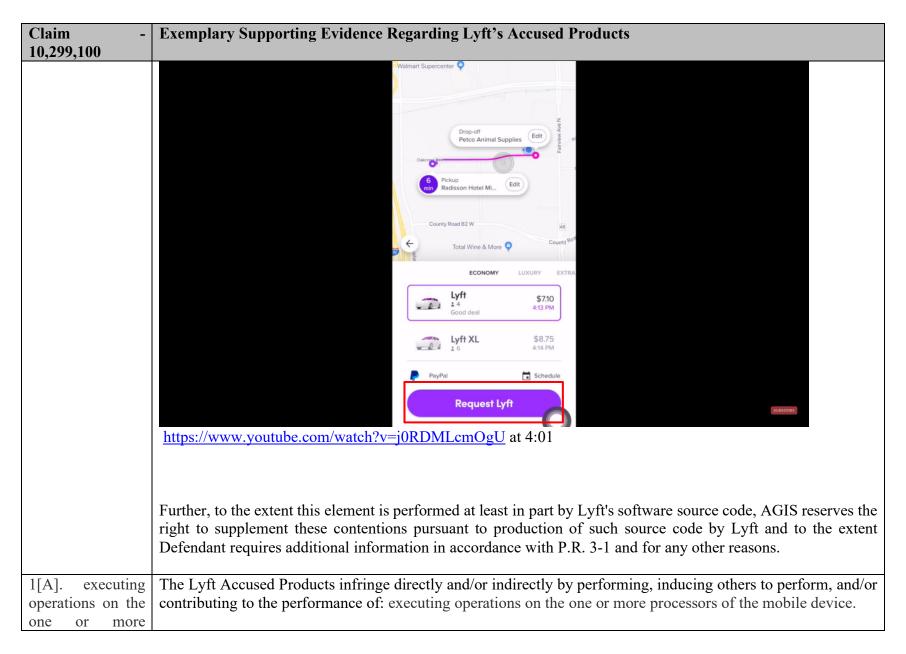
The contents of every below claim cell on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein

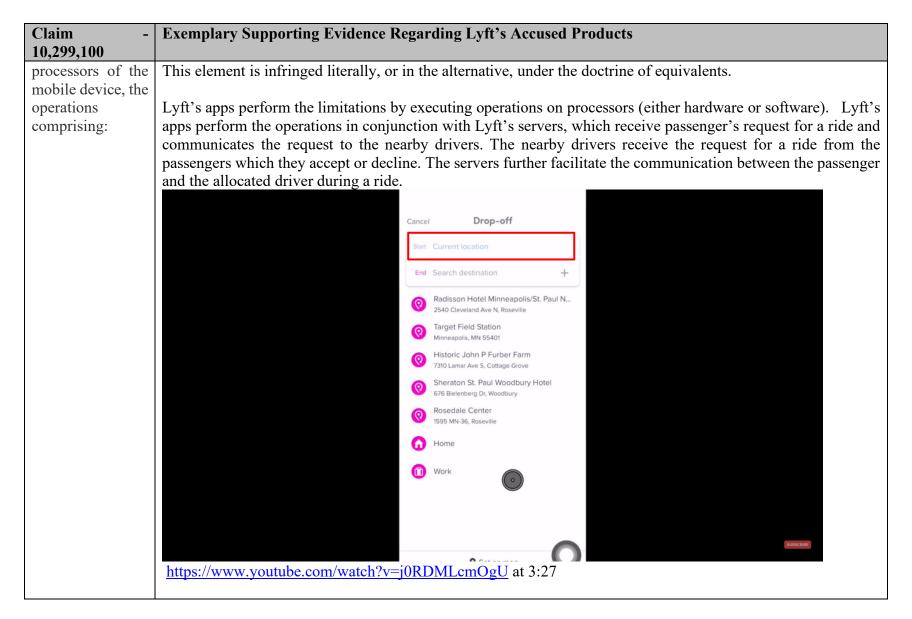
¹ The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. No. 205 (Lead Case) (E.D. Tex. Oct. 10, 2018) and *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. No. 147 (Lead Case) (E.D. Tex. Dec. 20, 2020). AGIS reserves the right to update its constructions and contentions in view of this Court's claim construction order.

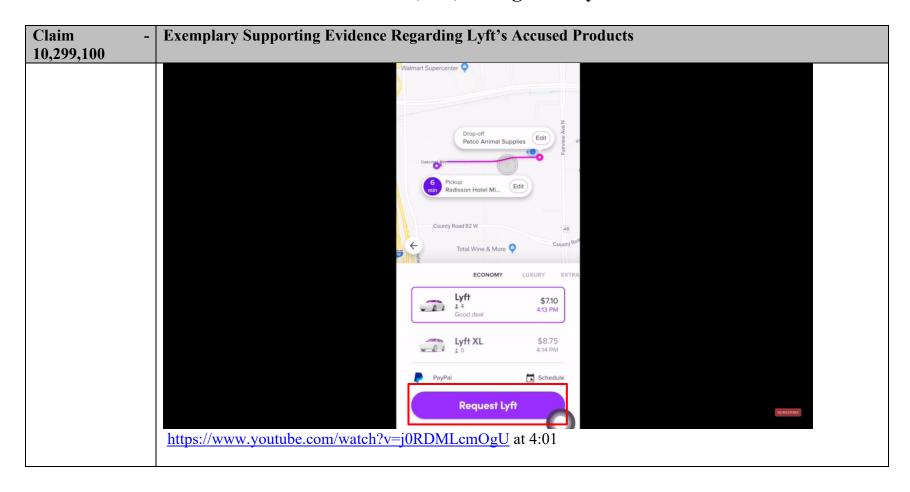
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
1[P]. A method performed by a mobile device having a display	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method performed by a mobile device having a display and one or more processors.
and one or more	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
processors, the method comprising:	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app

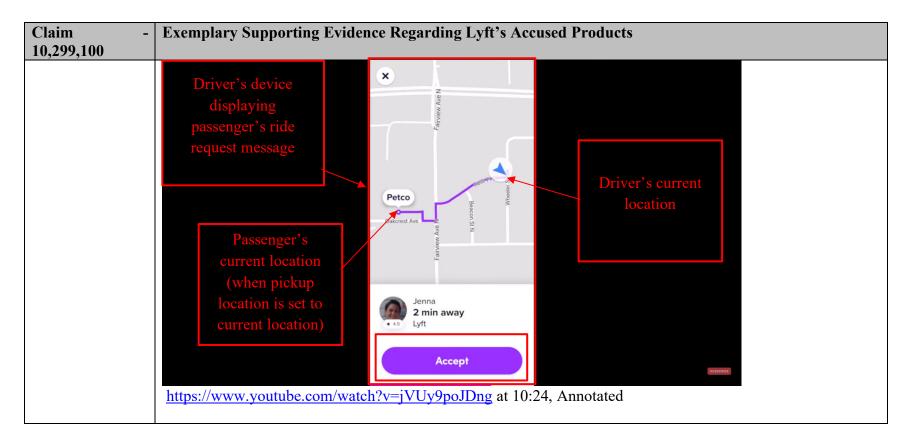




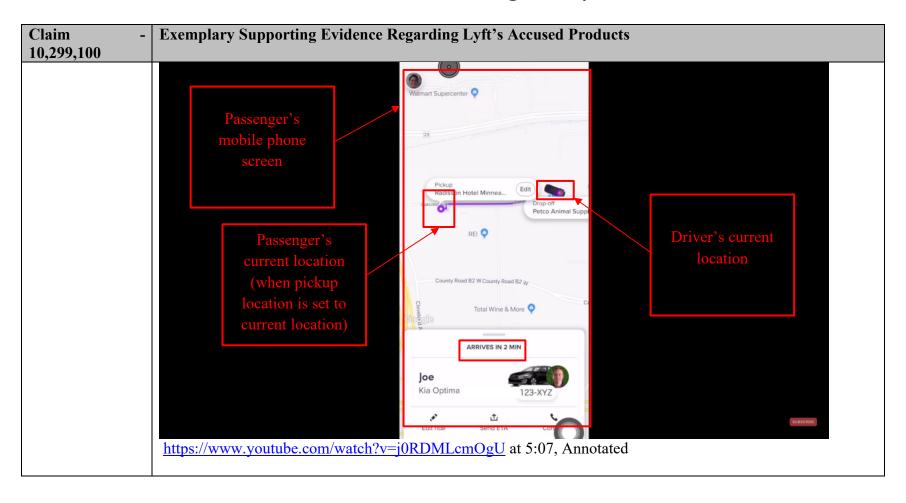


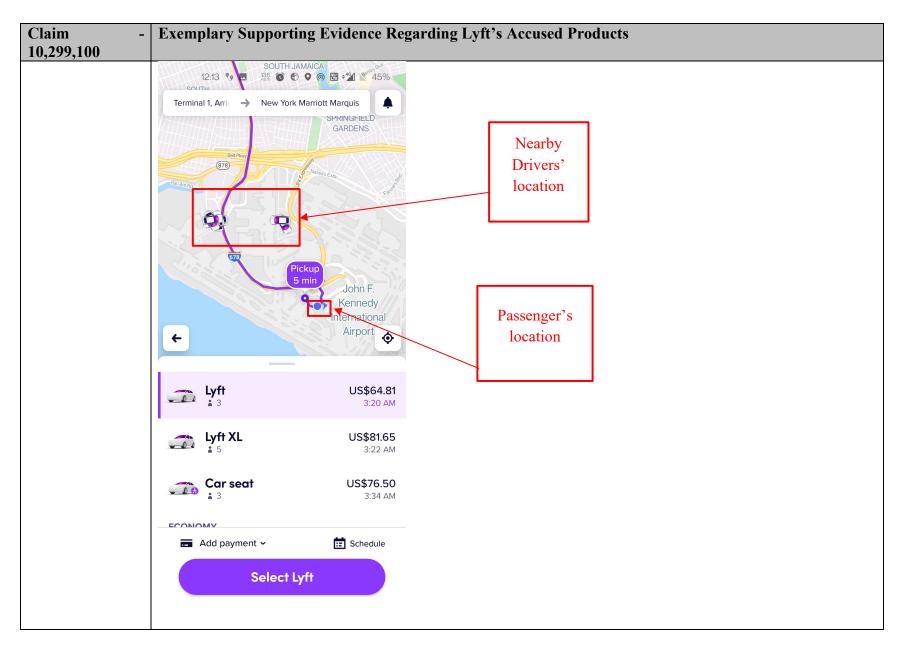




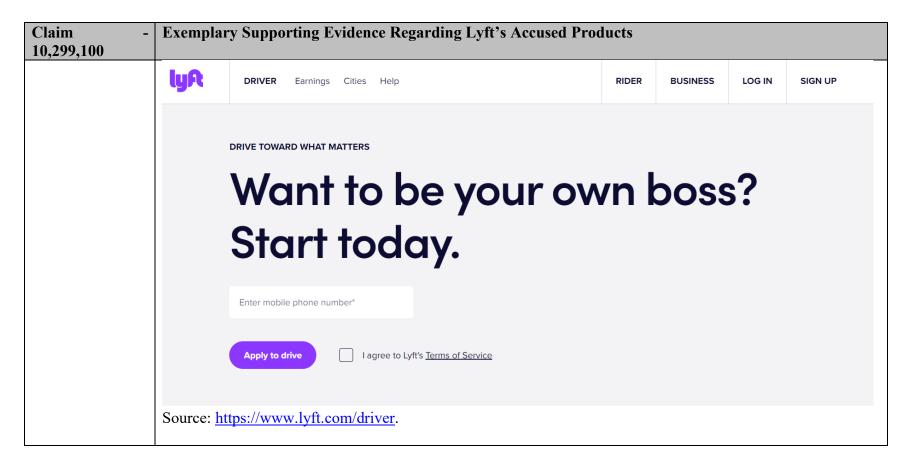


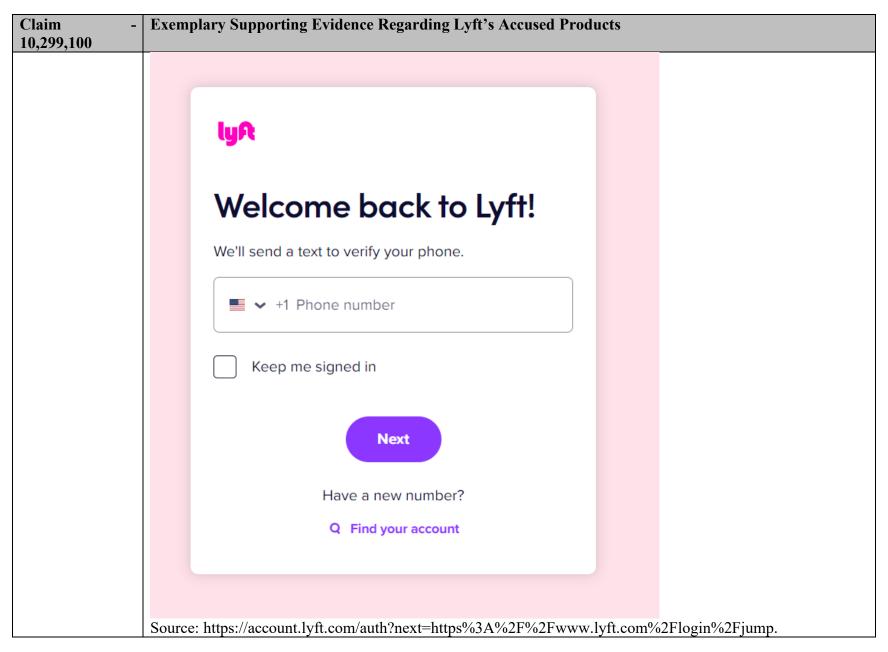






Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
1[B]. associating the mobile device with an identifier, wherein the identifier corresponds to a network participant	

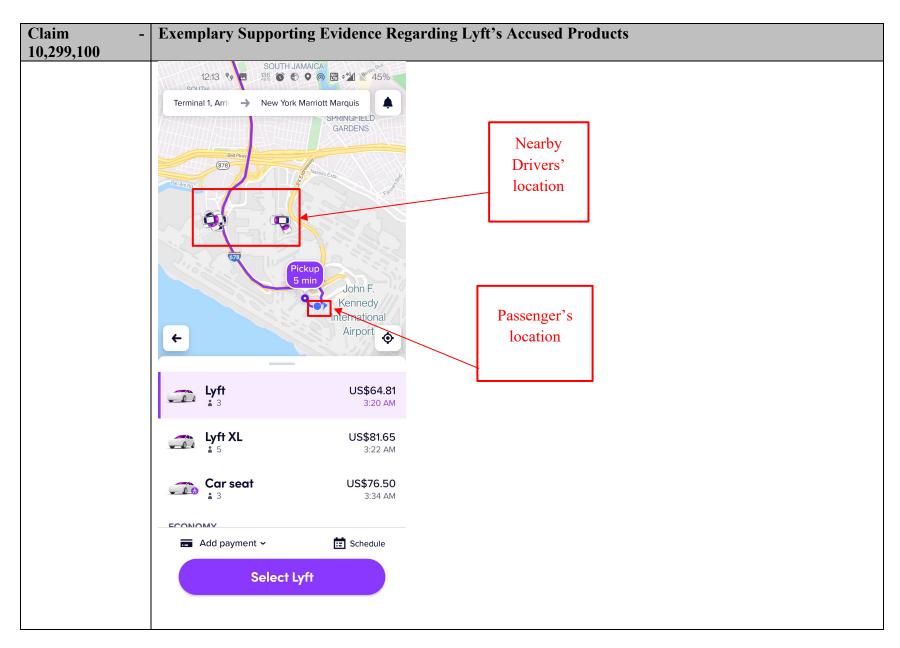




Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	 That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[C]. determining a device location	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
corresponding to	contributing to the performance of: determining a device location corresponding to a geographical location of the mobile device.
a geographical	
location of the mobile device	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
moone device	The Lyft app performs this limitation by determining the location of the device associated with the account or identity data described above. For example, the passenger's Lyft app installed determines the passenger's

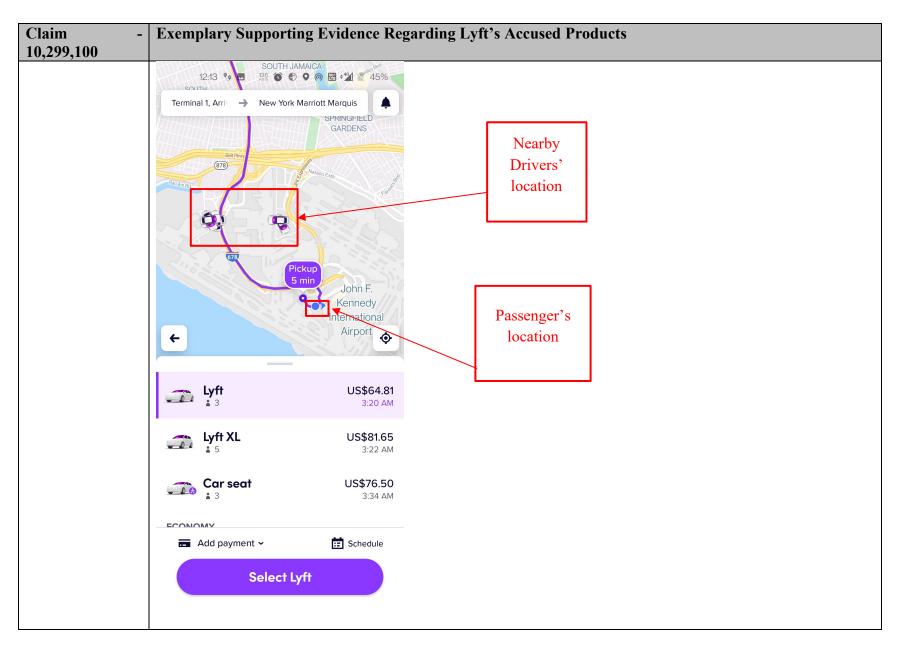
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 312 of 1092

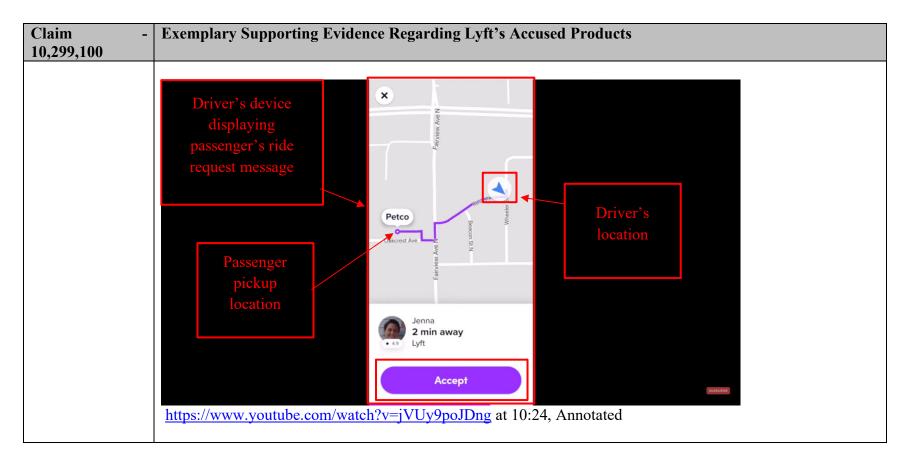
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	location and displays it on the map in the Lyft app. Similarly, the driver's mobile phone with the Lyft Driver app installed determines the driver's location and displays it on the map in the Lyft Driver app. On information and belief, the rider's location comprises geographical coordinates or geotagged/geocoded/georeferenced information related to a rider's geographical location.

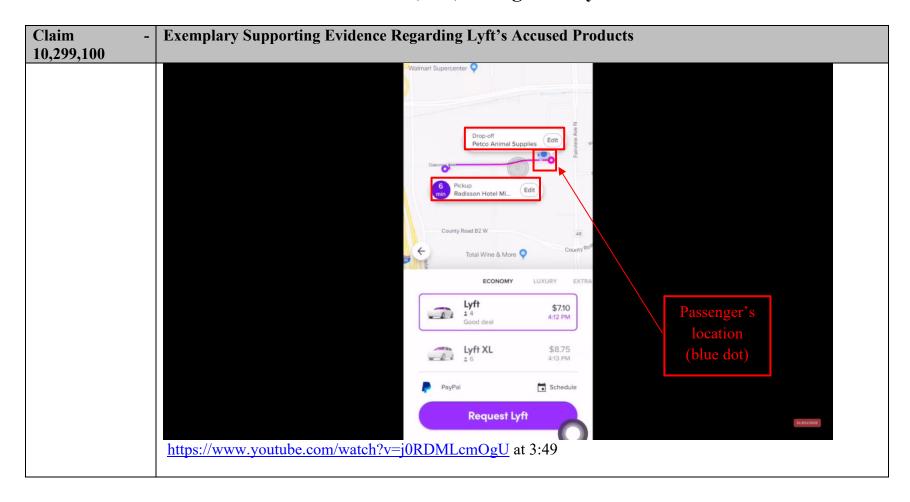


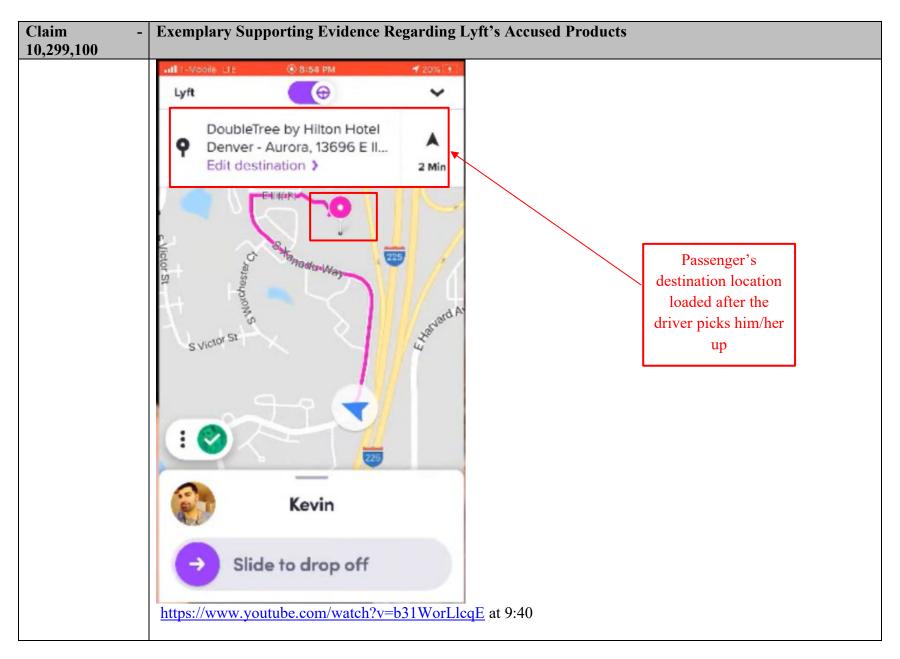
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	Driver's device displaying passenger's ride request message Petco Oakcrest Ave Bardon St. N. Jenna Jenna
1[D]. receiving, from a server, mapping data including a map and coordinate translation data correlating	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons. The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving, from a server, mapping data including a map and coordinate translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations. This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
coordinates of	The Lyft app performs this limitation because it receives maps and/or map tiles from a server for displaying a
positions on the	map in the Lyft app display. The Lyft app also receives data for correlating map coordinates to geographical
map with	locations. For example, the Lyft server transmits the calculated location coordinates of the passenger and nearby
corresponding	drivers to the passenger's device and loads them on the map. Further, the location coordinates of the driver and
coordinates of	the passenger (pickup location) are transmitted to the driver's device during the ride request from the passenger.
geographical	Once the ride is accepted and the passenger is picked up by the driver, the destination address of the passenger is
locations	also loaded on the map in the Lyft Driver app on the driver's device.

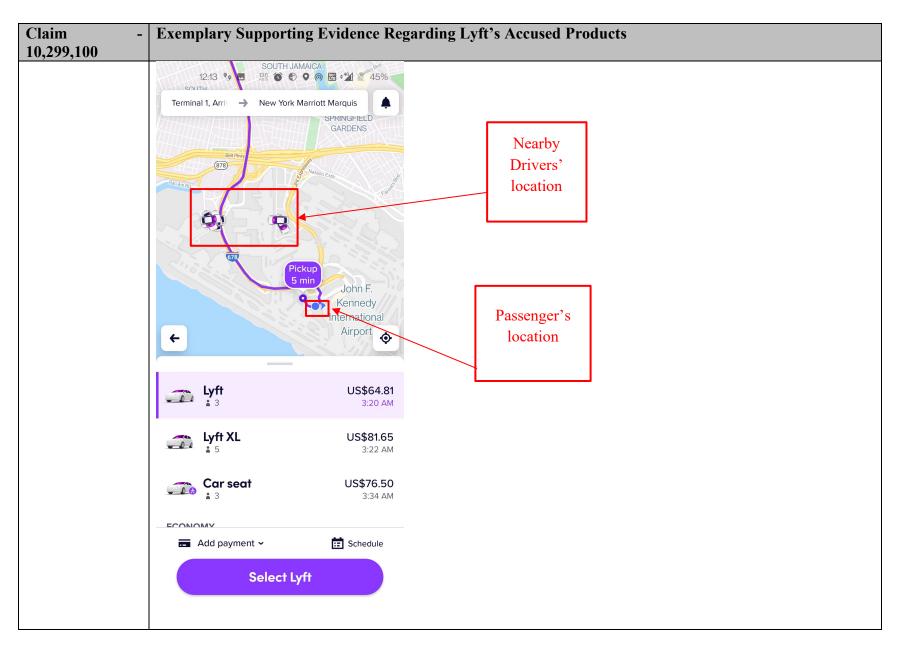




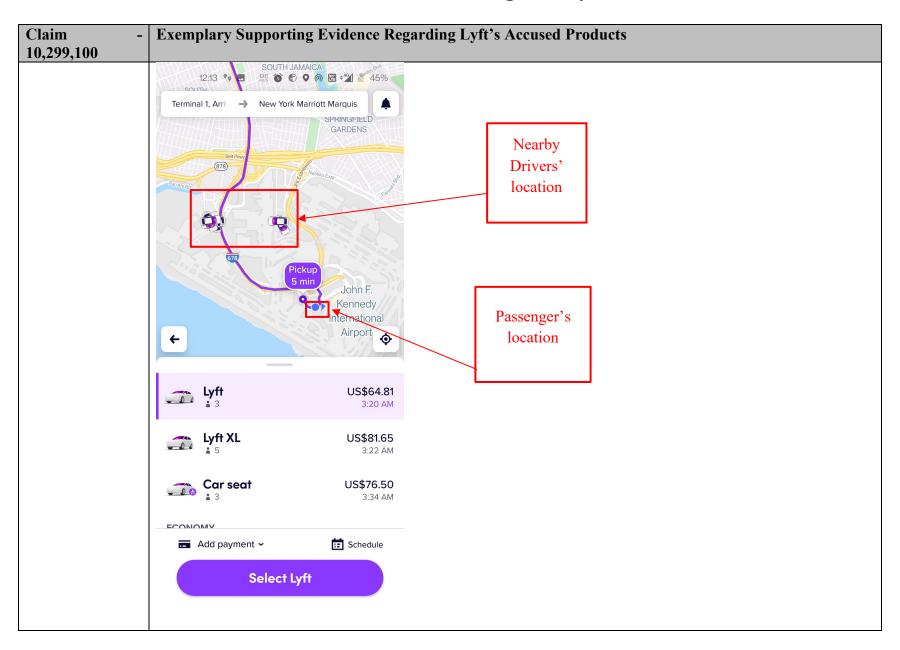


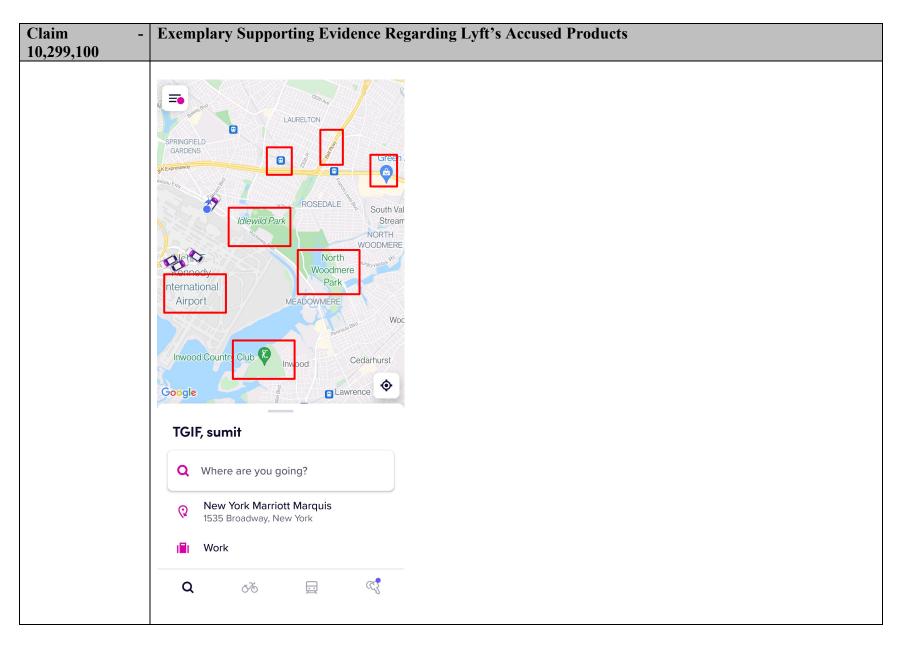


Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[E]. receiving,	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
from a server,	contributing to the performance of: receiving, from a server, location data indicating vehicle locations of one or
location data	more vehicles.
indicating vehicle	
locations of one	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
or more vehicles	
	The Lyft app performs this limitation because it receives vehicle location data from a server and that vehicle
	location data indicates the locations of drivers/vehicles. For example, the Lyft server transmits the calculated
	location coordinates of the passenger and nearby drivers ("location data indicating vehicle locations of one or
	more vehicles") to the passenger's device and loads them on the map in the Lyft app on the passenger's device.

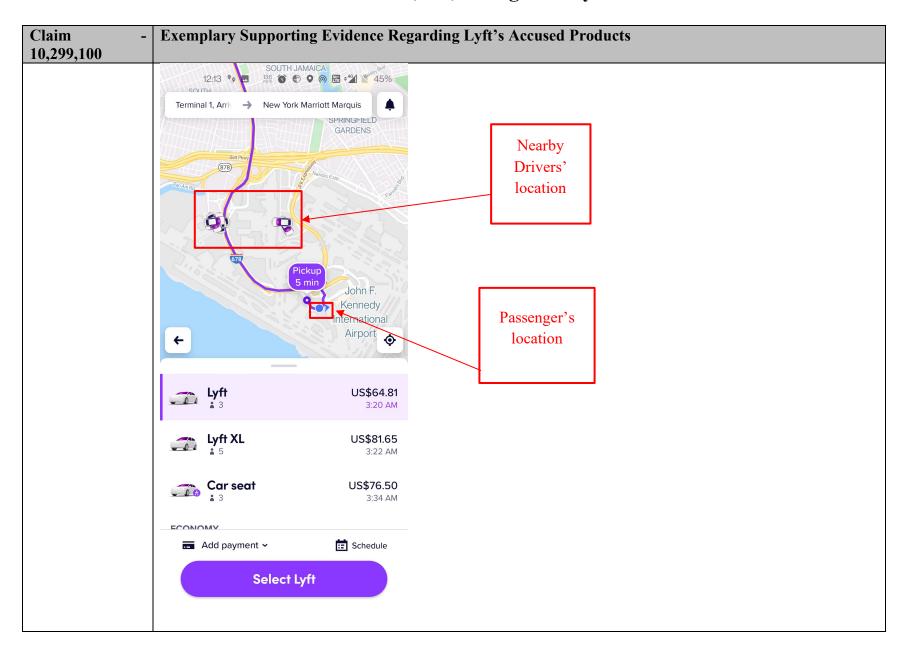


Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
1[F]. marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons. The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to the respective vehicle locations of the one or more vehicles. This element is infringed literally, or in the alternative, under the doctrine of equivalents. The Lyft app performs this limitation because the Lyft app displays multiple symbols on its map, including a symbol for vehicles, facilities, businesses, landmarks, and other points of interest. For example, the map in the Lyft app on the passenger's device comprises a blue dot ("participant symbol") depicting the passenger's current location. Further, the map also highlights locations including but not limited to airports, road names, parks, shops and railway stations ("facility symbol"). The location of the nearby drivers is highlighted on the map in the passenger's device using vehicle icons.
the respective	
vehicle locations of the one or more	
vehicles, wherein	
marking the map comprises	





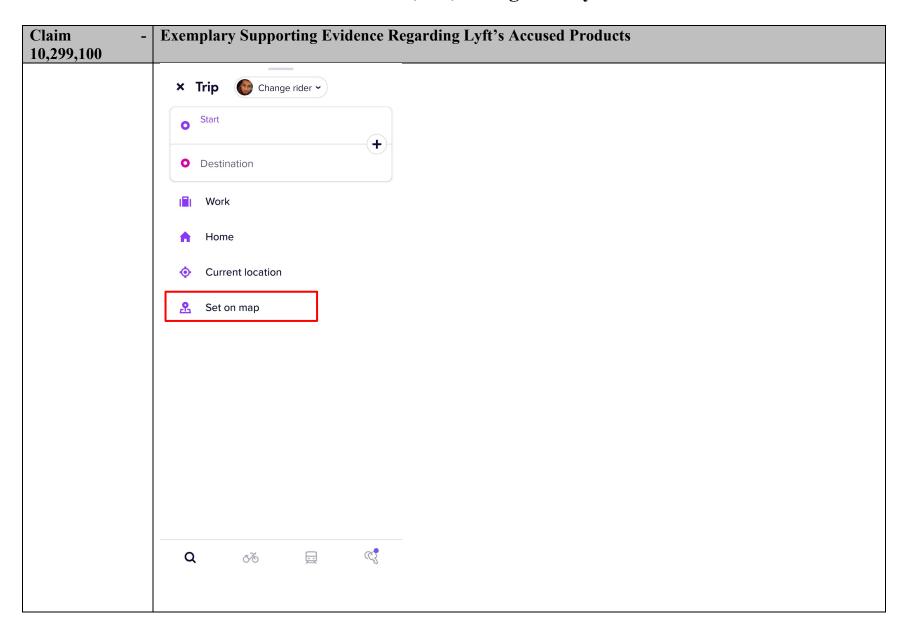
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[G]. wherein marking the map comprises: determining, based at least in part on the vehicle	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein marking the map comprises: determining, based at least in part on the vehicle locations and the coordinate translation data, positions on the map corresponding to the vehicle locations, displaying the map on the display of the mobile device, and placing the vehicle symbols on the map at the determined positions corresponding to the vehicle locations.
locations and the coordinate	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
translation data, positions on the map corresponding to the vehicle locations, displaying the map on the	The Lyft app performs this limitation because it determines where to place symbols on its map and places those symbols based on the data received from the server. For example, the Lyft server determines the location coordinates of the nearby drivers with respect to the passenger and transmits them to the Lyft app on the passenger's device. The location coordinates of the nearby drivers are loaded on the map and is displayed on the passenger's device. Each vehicle on the map indicates the position of a nearby driver.
display of the mobile device, and placing the vehicle symbols on the map at the determined positions corresponding to	
the vehicle locations.	

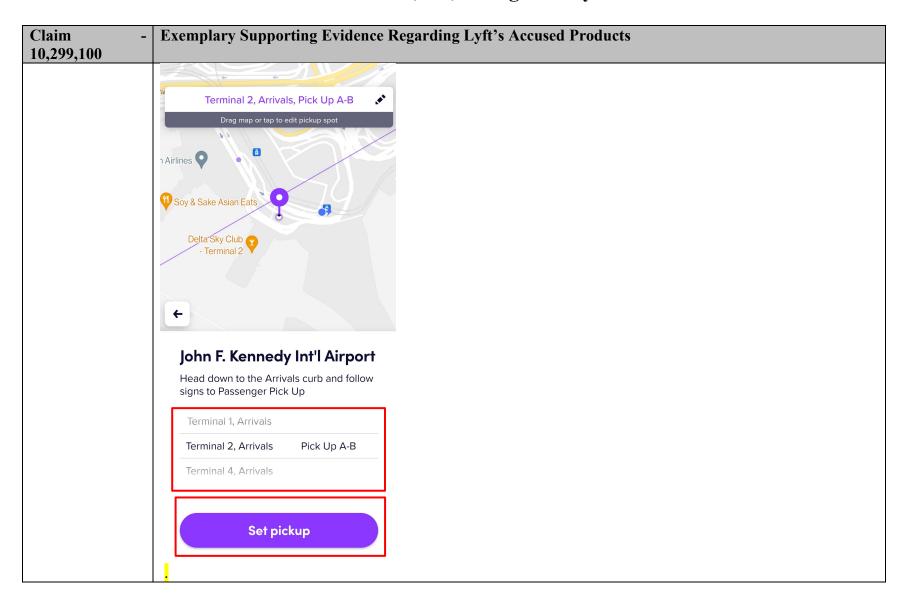


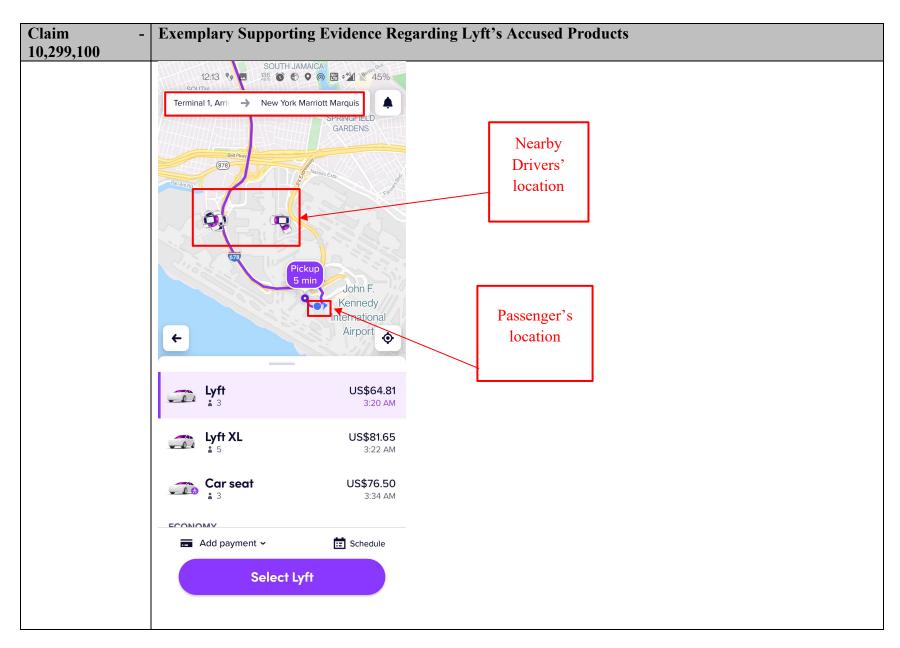
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[H]. responsive	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
to user selection	contributing to the performance of: responsive to user selection of a portion of the display corresponding to a
of a portion of the	position on the map, identifying a selected facility symbol based on the selected position, comprising: initiating
display	a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position
corresponding to	and, based on a result of the search, identifying the selected facility symbol as the symbol located nearest to the
a position on the	selected position.
map, identifying a	
selected facility	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
symbol based on	
the selected	The Lyft app performs this limitation because it receives user input data regarding pickups, stops or destinations
position,	entered by a user and those pickups, stops or destinations correspond to geographical locations on a map. For
comprising:	example, the Lyft passenger users the Lyft app for riders to select a pickup location and a destination location.
initiating a search	The Lyft passenger can add entities of interest and select one or more entities of interest as a pickup or destination.
of a set of	The Lyft passenger can choose the pickup/stop/destination location by entering an address/location/shortcut or
symbols	by choosing it on a map which will add/enter a symbol on the map and the passenger can change the location of
including the	the added/enter symbol to specify the location of the added/entered symbol as a pickup/stop/destination. Each of
facility symbols	these methods will cause a symbol corresponding to the pickup/stop/destination to be added/entered on the map
for a symbol	at the corresponding location. When the passenger completes this process, data associated with the added/entered
located nearest to	symbol as a pickup/stop/destination is communicated to the Lyft server(s). Adding/entering the symbol for a
the selected	pickup/stop/destination can occur before or during a ride. On information and belief, when a user enters an
position and,	address, place, or shortcut, the Lyft app will search for and place a symbol at the nearest position to the address,
based on a result	place or shortcut.
of the search,	
identifying the	The Lyft app performs this limitation because it receives user input identifying a destination/stop. For example,
selected facility	when a passenger is booking the ride, Lyft provides a set location on the map providing an option for which the
symbol as the	passenger selects the position on a map. For example, the passenger selects the position for a pickup such as
symbol located	anairport, in response to which Lyft initiates identifying the selected position and searching for all the symbols

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 328 of 1092

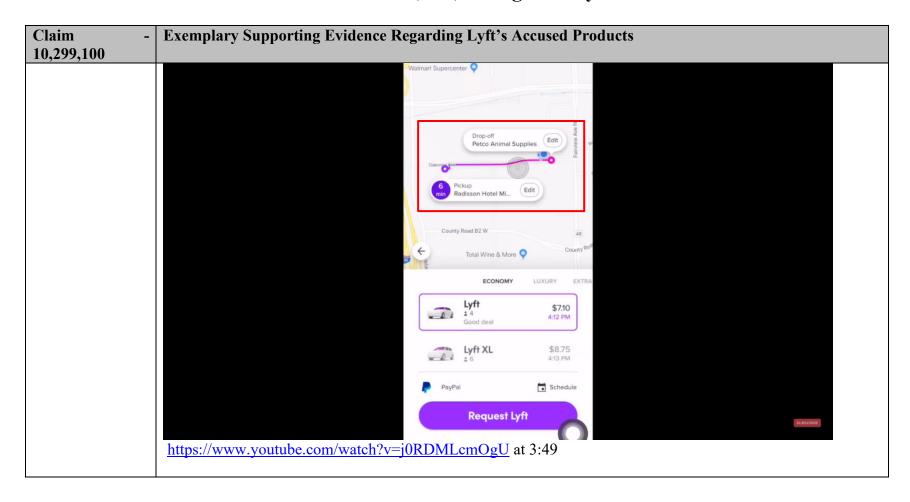
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
nearest to the	located nearby to the airport and identifying them (including but not limited to Terminal 1, Terminal 2 and
selected position	Terminal 4).

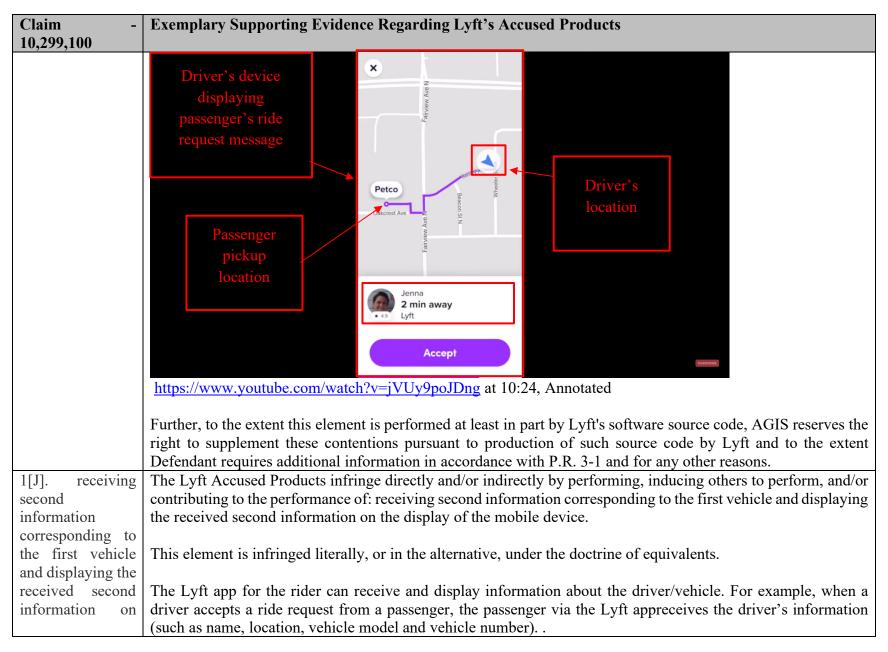


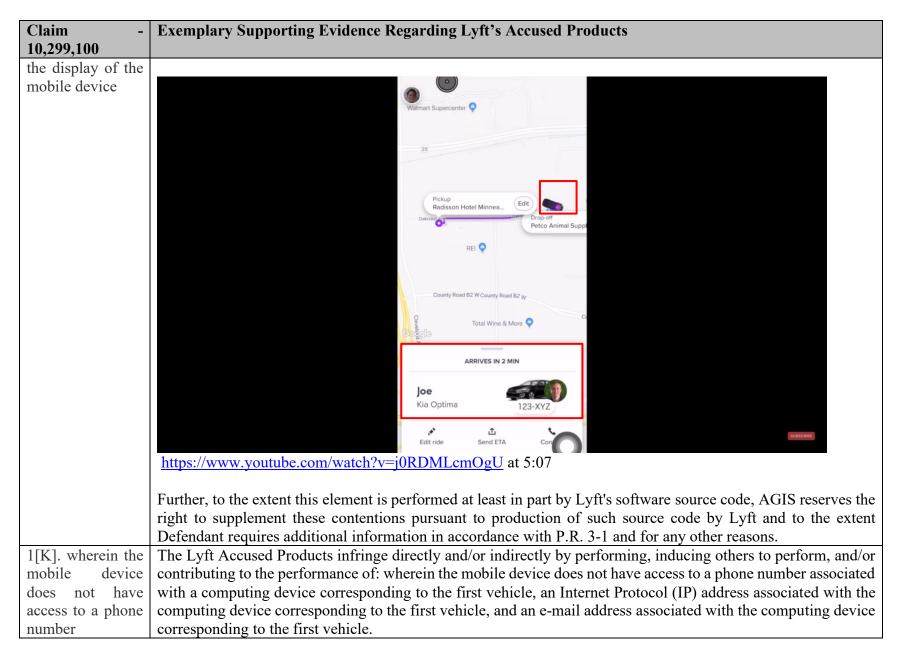




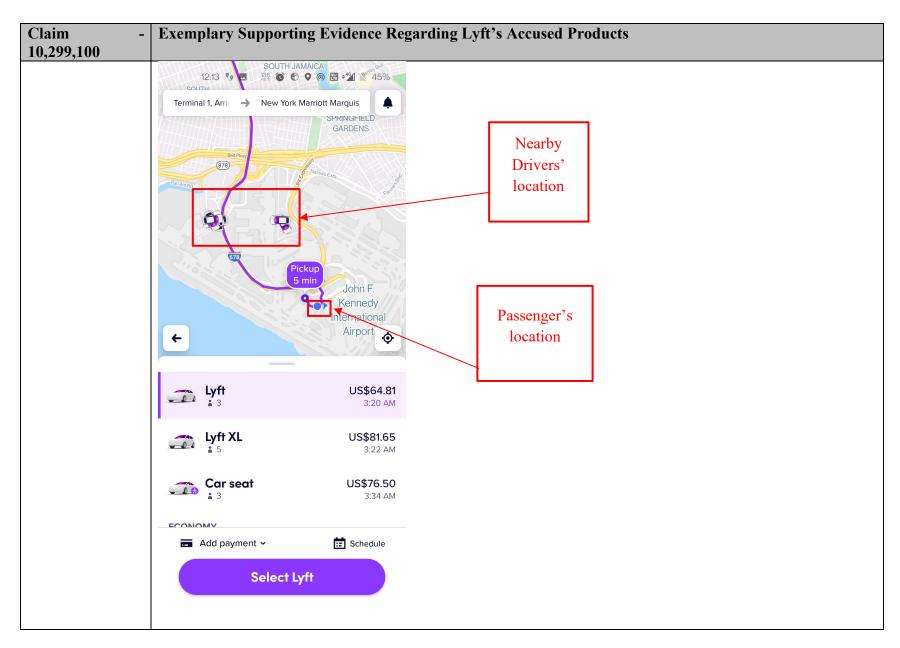
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[I]. responsive to	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
user input,	contributing to the performance of: responsive to user input, transmitting first information to a first vehicle of the
transmitting first	one or more vehicles.
information to a	
first vehicle of the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
one or more	
vehicles; and	The Lyft app sends information regarding the pickup/stops/destination and/or information about the passenger and this information is communicated to a driver. For example, when a passenger requests a ride by providing a pickup location (current location of passenger or any specific location) and a destination address, the request ride message comprising the pickup location and the passenger's name and photo ("first information") is communicated to nearby drivers to find the ride.

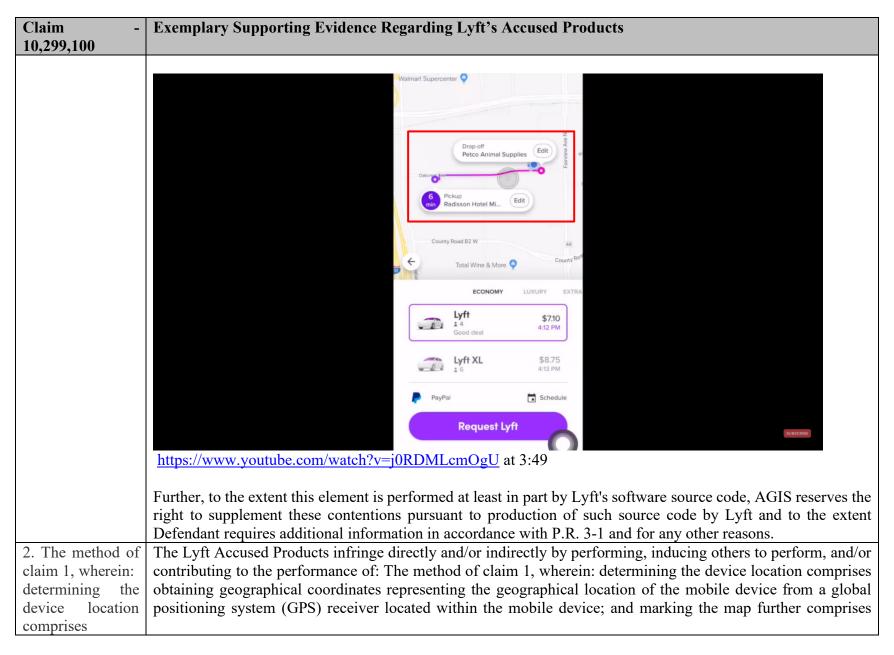




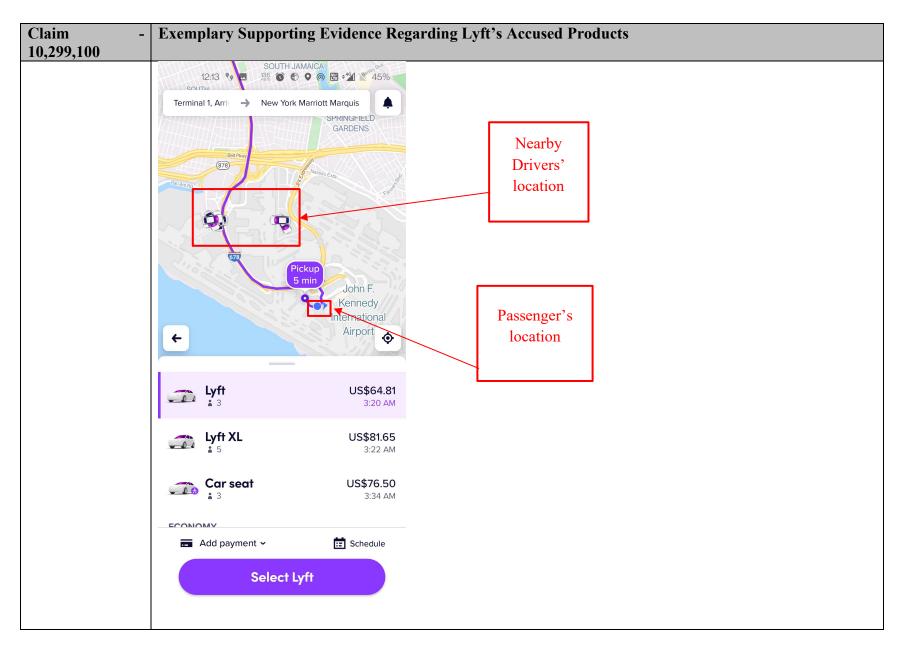


Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
associated with a	
computing device	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
corresponding to	
the first vehicle,	The Lyft app for the rider does not have access to the driver's phone number associated with the driver's account.
an Internet	The Lyft app for the rider also does not have access to the driver's email address or driver's IP address associated
Protocol (IP)	with the driver's device through the Lyft app. For example, the passenger does not have any information of the
address	driver (such as email address, IP address, and contact number) and this information is not available through the
associated with	Lyft app for the rider.
the computing	
device	
corresponding to	
the first vehicle,	
and an e-mail	
address	
associated with	
the computing	
device	
corresponding to	
the first vehicle.	

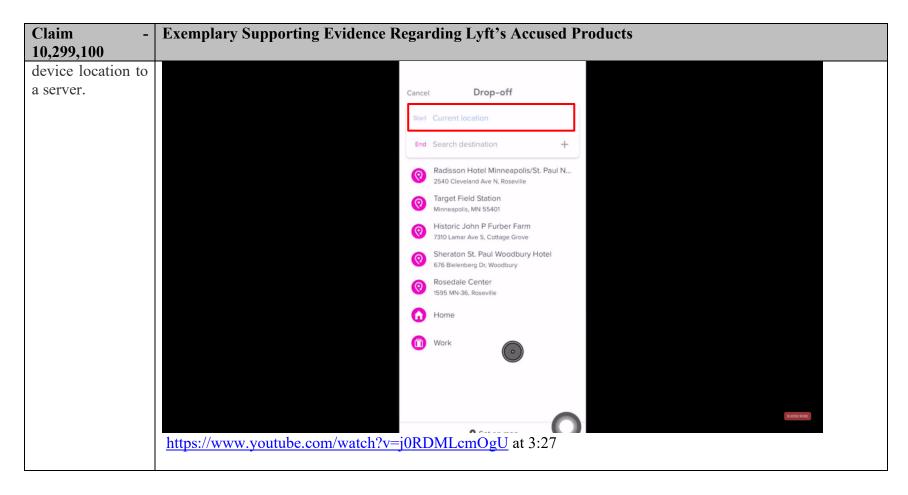


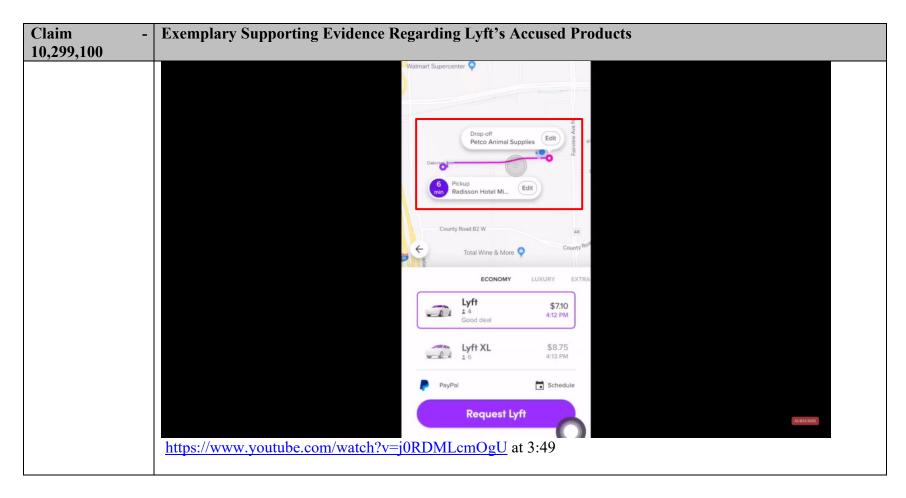


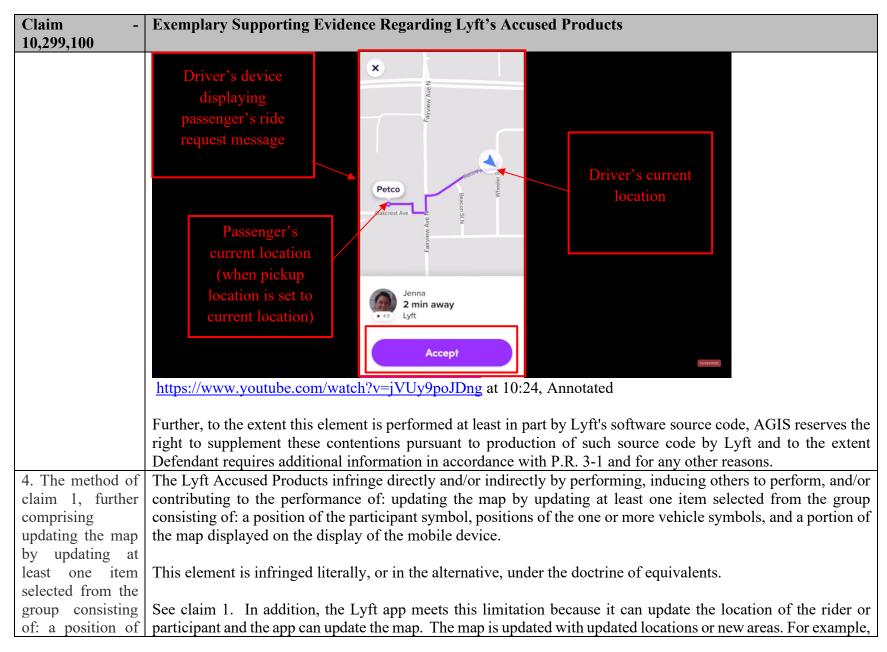
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
obtaining geographical coordinates	placing the participant symbol at a position on the map corresponding to the geographical coordinates representing the geographical location of the mobile device.
representing the geographical location of the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
mobile device from a global positioning system (GPS)	See claim 1. Further, the Lyft app meets this limitation because it can receive GPS data to determine a location and use that location to place a symbol at the location on the map. On information and belief, the location is provided in coordinates.
receiver located within the mobile device; and marking the map	
further comprises placing the participant symbol at a	
position on the map corresponding to	
the geographical coordinates	
representing the geographical location of the	
mobile device.	



es the
CAICIII
and/or
g data
1
dentity
n

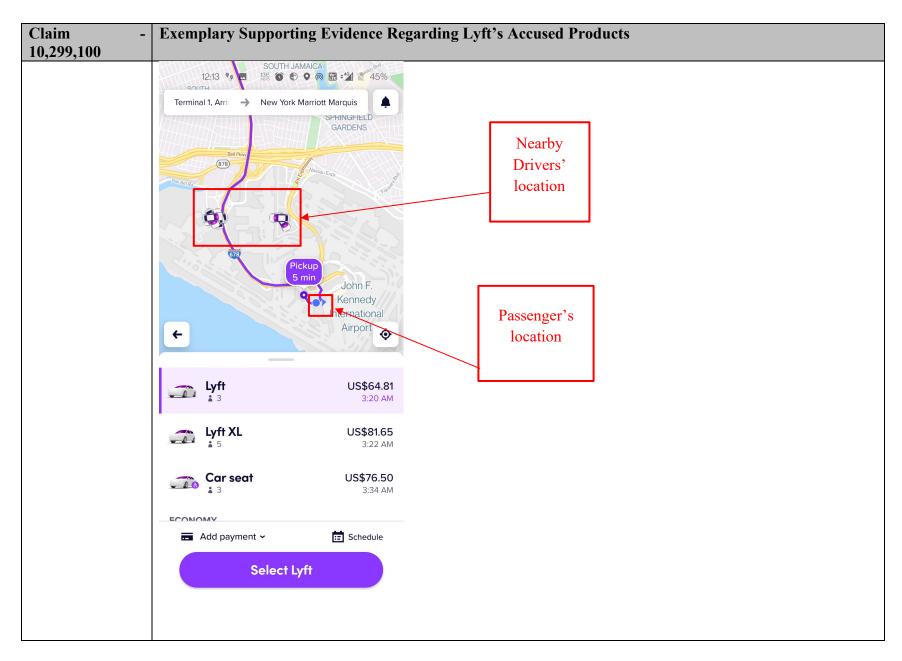




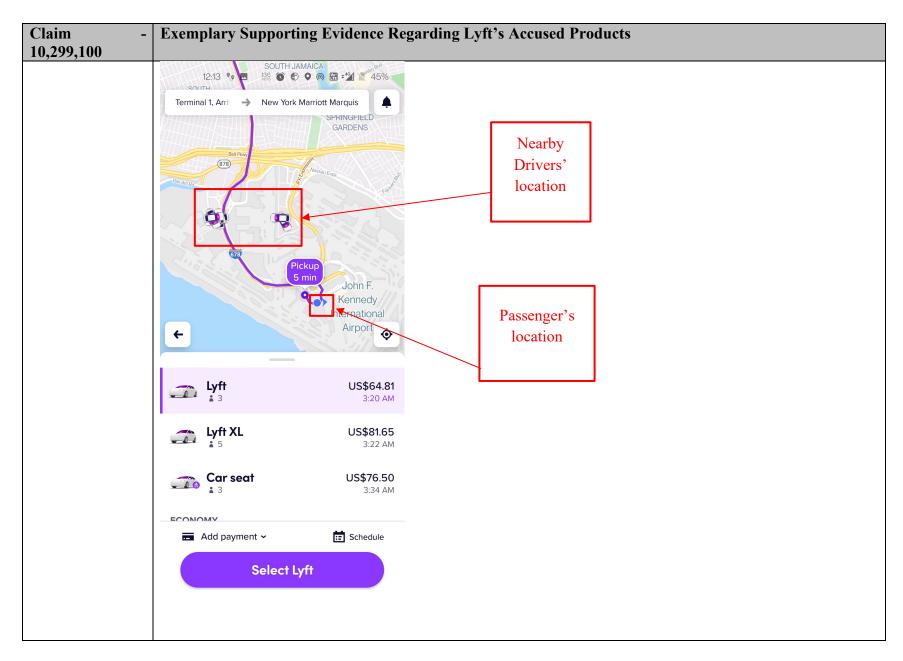


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 345 of 1092

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
the participant	the Lyft app updates the map with the passenger's current location coordinates and the nearby drivers' location
symbol, positions	corresponding to their respective location coordinates. On information and belief, the map can be updated in
of the one or more	response to interactions with the map, change of time/orientation, and/or user input or automatic input to the Lyft
vehicle symbols,	app from the user or Lyft server.
and a portion of	
the map displayed	
on the display of	
the mobile device.	



	Exemplary Supporting Evidence Regarding Lyft's Accused Products
5. The method of claim 1, further comprising: receiving, from a server, updated respective vehicle locations of the one or more vehicles; and updating, based on the received	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons. Every Lyft Accused Product infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving, from a server, updated respective vehicle locations of the one or more vehicles; and updating, based on the received updated vehicle locations and the coordinate translation data, positions of the one or more vehicle symbols on the map. This element is infringed literally, or in the alternative, under the doctrine of equivalents. See claim 1. Further, the Lyft app meets this limitation because the locations can be updated based on data received from the Lyft server and the locations presented on the map can be updated based on that data from the server. For example, the Lyft server updates the map in the Lyft app with the nearby drivers' location (vehicle icons) corresponding to their respective location coordinates.



Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
6. The method of claim 1, further comprising: receiving, from a GPS receiver,	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of receiving, from a GPS receiver, updated device locations and updated, based on the received device locations and the coordinate translation data, a position of the participant symbol on the map.
updated device locations; and updating, based on the received device locations and the coordinate translation data, a position of the participant symbol on the map.	This element is infringed literally, or in the alternative, under the doctrine of equivalents. See Claims 1 and 2 above.
7. The method of claim 1, wherein the received second information is	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of the received second information is sent by the computing device corresponding to the first vehicle based on at least one criterion selected from the group consisting of: (1) passage of time, and (2) movement of the first vehicle.
sent by the computing device corresponding to the first vehicle based on at least one criterion	participant and the app can update the map. The map is updated with update locations or new areas. On information and belief, the map can be updated in response to interactions with the map, change of

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
selected from the group consisting of: (1) passage of time, and (2) movement of the first vehicle.	when a driver accepts a ride request from a passenger in the Lyft Driver app, the passenger's app receives the driver's information (such as name, location, vehicle name and vehicle number) along with the estimated time of arrival = and the movement of the driver's car from the server.
	Pickup Radisson Hotel Minnea Dirop-off Petco Animal Suppl
	County Road B2 W County Road B2 W Total Wine & More ARRIVES IN 2 MIN
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:07
8. The method of	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons. The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, wherein	contributing to the performance of receiving second information which comprises one or more messages.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
the received	
second	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
information	
comprises one or	See claim 1[J] above.
more messages.	
9. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 8, wherein	contributing to the performance of the one or more messages which comprises data to facilitate the mobile device
the one or more	transmitting the first information to the first vehicle without the mobile device using the phone number, IP
messages	address, and e-mail address associated with the first vehicle.
comprise data to	
facilitate the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
mobile device	
transmitting the	See claim 1. The Lyft app meets this limitation because a rider is able to communicate a text message or voice
first information	message to the driver without knowing the driver's phone number, IP address and email address. On information
to the first vehicle	and belief, this communication is transmitted via a Lyft server.
without the	
mobile device	
using the phone	
number, IP	
address, and e-	
mail address	
associated with	
the first vehicle.	
10. The method of	
claim 1, further	contributing to the performance of communicating the identifier to a server and joining a communication network
comprising:	after the communication of the identifier to the server.
communicating	
the identifier to a	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
server; and	
joining a	See claim 1[B] above
communication	

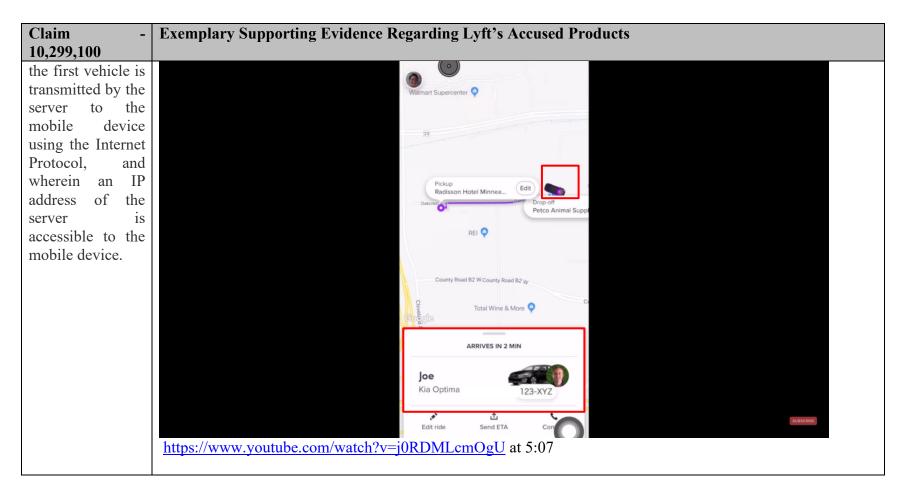
network after the communication of the identifier to the server. 11. The method of claim 10, wherein the communication network comprises one or more communication network comprises one or more communication devices is associated with a respective identifier. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication and associates the information with the respective device of the driver. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need rides.	Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
communication of the identifier to the server. 11. The method of claim 10, wherein the communication network comprises one or more communication network comprises one or more communication network comprises one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices and wherein each of the one or more whicles, and wherein each of the one or more communication devices is associated with a respective identifier. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
the identifier to the server. 11. The method of claim 10, wherein the communication network of the communication network comprises one or more communication network comprises one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices and wherein each of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
the server. 11. The method of claim 10, wherein the communication network comprises one or more communication network comprises one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more whicles, and wherein each of the cone or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective dientifier. This element is infringed literally, or in the alternative, under the doctrine of equivalents. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective decounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of the communication network comprises one or more communication devices is associated with a respectively, to the one or more communication devices, and wherein each of the one or more vehicles, and wherein each of the contributing to the performance of the communication network comprises one or more communication devices is associated with a respectively, to the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective device of the driver. For example, the Lyft Driver app allows a driver to set up their account by providing information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
claim 10, wherein the communication network comprises one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and wherein each of the one or more vehicles, and vehicle information network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
communication network comprises one or more communication devices corresponding, respectively, to the one or more communication devices corresponding, respectively, to the one or more whicles, and wherein each of the one or more counts are part of the Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
devices is associated with a respective identifier. This element is infringed literally, or in the alternative, under the doctrine of equivalents. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	-	
network comprises one or more communication devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. This element is infringed literally, or in the alternative, under the doctrine of equivalents. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	communication	
more communication devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	network	1
more communication devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	comprises one or	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
devices corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	-	
corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	communication	See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective
respectively, to the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective lidentifier. not limited to, name, email address, phone number, driver's license and vehicle information and associates the information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	devices	accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and
the one or more vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. Information with the respective device of the driver. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the driver. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	corresponding,	passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but
vehicles, and wherein each of the one or more communication devices is associated with a respective identifier. The one or more communication devices is associated with a respective identifier. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	respectively, to	not limited to, name, email address, phone number, driver's license and vehicle information and associates the
wherein each of the one or more communication devices is associated with a respective identifier. For example, the Lyft app also allows a passenger to set up their account by providing information including but not limited to name, email address and phone number and associates the information with the respective device of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	the one or more	information with the respective device of the driver.
the one or more communication devices is associated with a respective identifier. The one or more communication of the passenger. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	vehicles, and	
communication devices is associated with a respective identifier. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
devices is associated with a respective identifier. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need	the one or more	· •
associated with a respective identifier. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		of the passenger.
respective identifier. What is Lyft? Lyft is a platform that connects drivers with individuals and organizations that need		
identifier. Lyft is a platform that connects drivers with individuals and organizations that need		
Lyft is a platform that connects drivers with individuals and organizations that need	-	What is Lyft?
	identifier.	wildt is Lyit:
rides.		Lyft is a platform that connects drivers with individuals and organizations that need
		rides.
https://www.lyft.com/drive-with-lyft		https://www.lvft.com/drive_with_lvft
<u>πιτρσ.// w w w.ryrt.com/urrve-with-ryrt</u>		https://www.iyit.com/utive-with-iyit

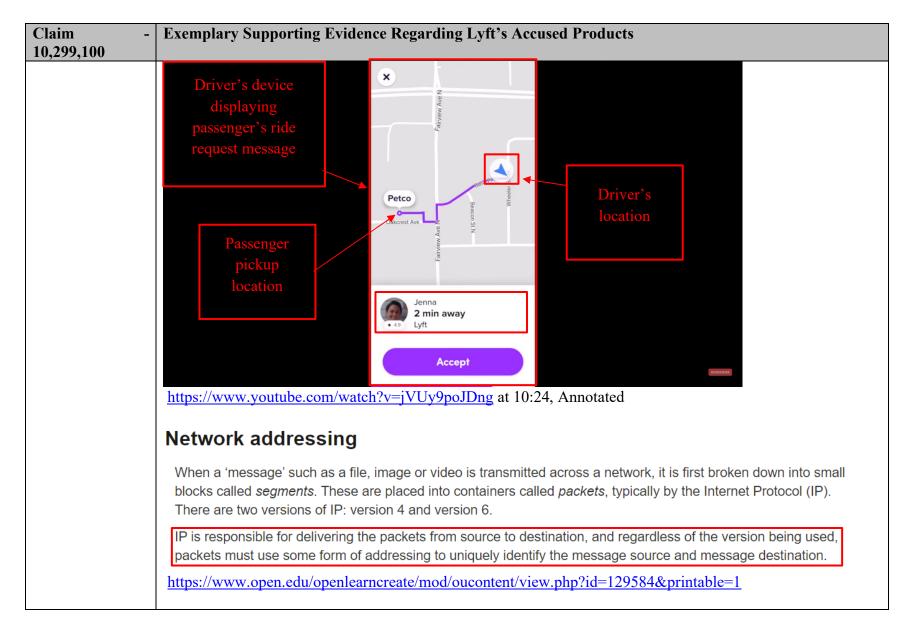
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	 Age requirement
	Vehicle requirements
	 Driving history
	Background check
	DMV check
	Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188

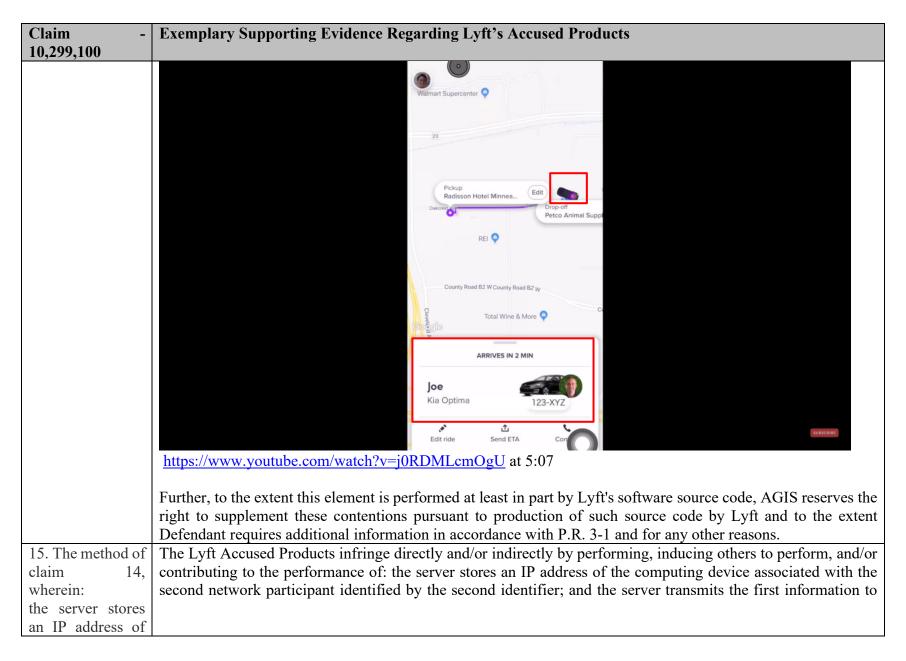
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	 That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
12. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, further comprising	contributing to the performance of: determining a location-reporting status of the mobile device, wherein the location-reporting status is one of a reporting state and a non-reporting state, and wherein transmitting the first
determining a	information to the first vehicle comprises sending the device location to a server only when the location-reporting
location-reporting	status is in the reporting state.
status of the	
mobile device, wherein the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
location-reporting	

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
status is one of a reporting state and a non-reporting state, and wherein transmitting the	See claim 1. The Lyft apps perform this limitation because they determine whether locations services/mode are enabled/disabled and if the location services/mode is enabled the Lyft app communicates location to the Lyft server. When location services are disabled, the Lyft app requests that the user enable location services to use the app and thus does not send location to the Lyft server. On information and belief, locations retrieved from location services are sent when location services are enabled.
first information to the first vehicle comprises sending the device location to a server only when the location-reporting status is in the reporting state.	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
13. The method of claim 1, wherein transmitting the first information to the first vehicle comprises	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: transmitting the first information to the first vehicle comprises transmitting data including the first information to a server using an Internet Protocol, wherein the second information corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol, and wherein an IP address of the server is accessible to the mobile device.
transmitting data including the first information to a server using an Internet Protocol, wherein the second information corresponding to	This element is infringed literally, or in the alternative, under the doctrine of equivalents. See claim 1. The Lyft app meets this limitation because it communicates information to the Lyft server(s) via IP-based communications. For example, a passenger's Lyft app transmits the ride request message to the nearby drivers via the Lyft server using IP based communication which includes the IP address of the server. After the driver accepts the ride request, the driver's information (including but not limited to driver's name, photo, vehicle name and vehicle model) is transmitted to the passenger's Lyft app via the server using IP based communication which includes the IP address of the server.





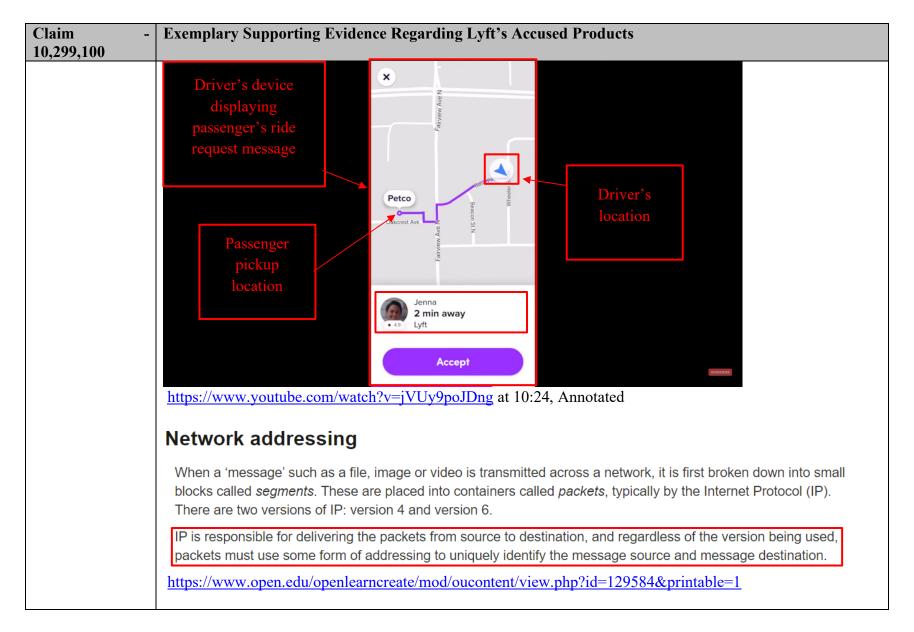
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
14. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 13, wherein	contributing to the performance of: the data transmitted to the server further includes a second identifier
the data	corresponding to a second network participant associated with the computing device corresponding to the first
transmitted to the	vehicle.
server further	
includes a second	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
identifier	
corresponding to	See claim 1 and 13. The Lyft app meets this limitation because the communications include account/identity
a second network	
participant	For example, when a driver accepts the ride request of the passenger, the rider's Lyft app receives the driver's
associated with	information (such as name, location, vehicle model and vehicle number) ("second identifier corresponding to a
the computing	second network participant") from the server and vice versa.
device	
corresponding to	
the first vehicle.	



Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
1 0	the computing device corresponding to the first vehicle in a message addressed to the stored IP address of the computing device corresponding to the first vehicle.
network participant	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
identified by the second identifier; and the server transmits the first information to the	See claims 1, 13, 14. The Lyft app stores the IP address of the Lyft app and communicates with the Lyft app (and accounts or identities) via IP based communication. On information Lyft server(s) store the IP addresses of Lyft app/accounts for use in IP based communication. For example, Lyft's server store IP addresses of each driver's device and associates it to the respective driver's information including but not limited to as name, location, vehicle model and vehicle number. When the passenger requests a ride, the request ride message ("first information") comprising pickup location and passenger's name and photo ("identifier") is communicated to the nearby drivers using their respective IP addresses which are stored in the server.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State</u> .
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check
	DMV check
	Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188



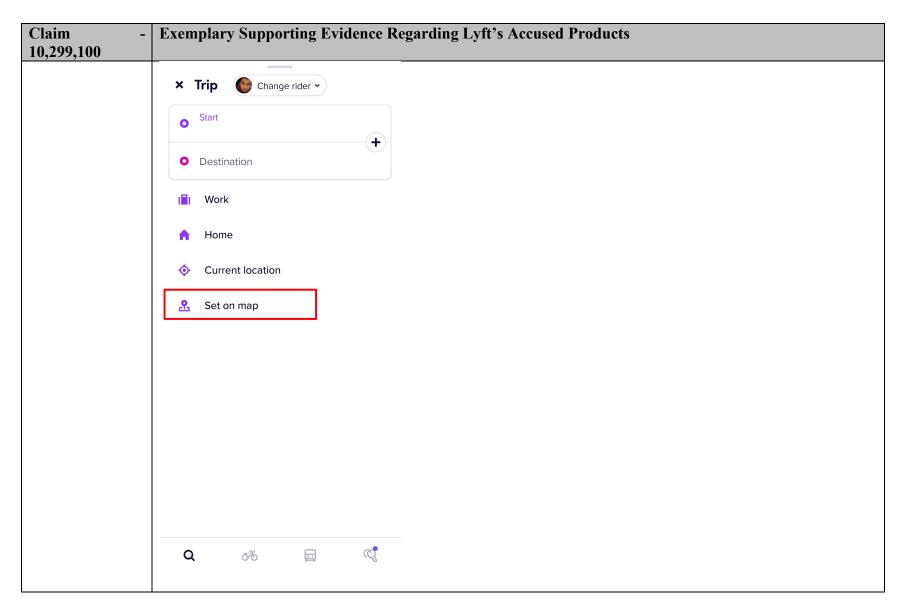
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
16. The method of	
claim 1, further	contributing to the performance of determining coordinates of the selected position on the map, wherein data
comprising	associated with the set of symbols include coordinates of positions on the map of the symbols in the set, wherein
determining	the search of the set of symbols includes a search of the coordinates of the positions of the symbols in the set for
coordinates of the	coordinates located nearest to the coordinates of the selected position, and wherein the selected facility symbol
selected position	is identified as the symbol located nearest to the selected position based on a result of the search of the coordinates
on the map,	of the positions on the map of the symbols.
wherein data	
associated with	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
the set of symbols	
include	See claim 1[H] above.
coordinates of	
positions on the	
map of the	
symbols in the set,	
wherein the	
search of the set	
of symbols	
includes a search	
of the coordinates	
of the positions of	
the symbols in the	
set for coordinates	
located nearest to	
the coordinates of	
the selected	
position, and	

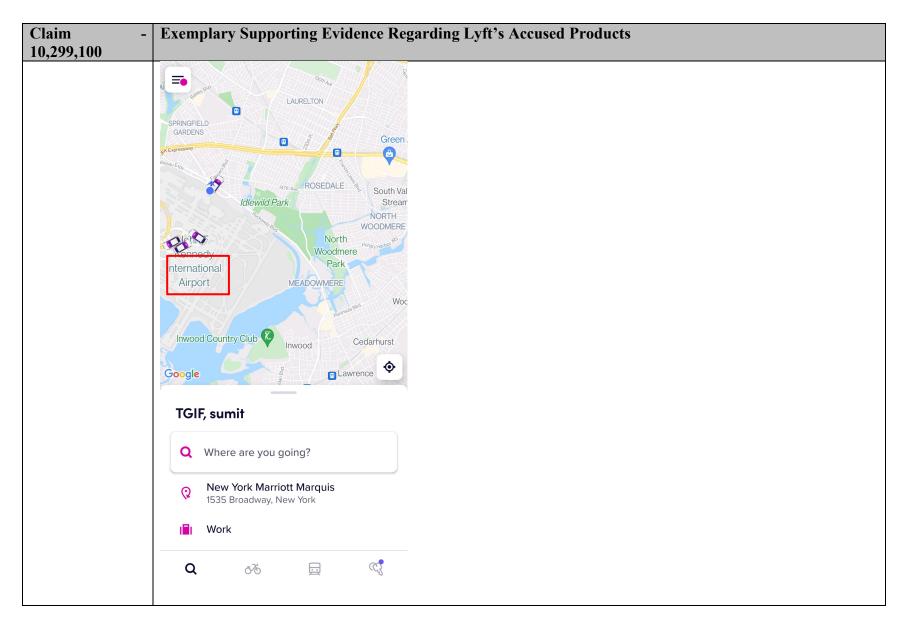
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
wherein the	
selected facility	
symbol is	
identified as the	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates of	
the positions on	
the map of the	
symbols.	
17. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, further	contributing to the performance of determining coordinates of the selected portion of the display, wherein data
comprising	associated with he set of symbols include coordinates of portions of the display corresponding to the symbols in
determining	the set, wherein the search of the set of symbols includes a search of the coordinates of the portions of the display
coordinates of the	corresponding to the symbols in the set for coordinates located nearest to the coordinates of the selected portion
selected portion	of the display, and wherein the selected facility symbol is identified as the symbol located nearest to the selected
of the display,	position based on a result of the search of the coordinates of the portions of the display corresponding to the
wherein data	symbols.
associated with	
the set of symbols	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
include	
coordinates of	See claim 1[H] above.
portions of the	
display	
corresponding to	
the symbols in the	
set, wherein the	
search of the set	

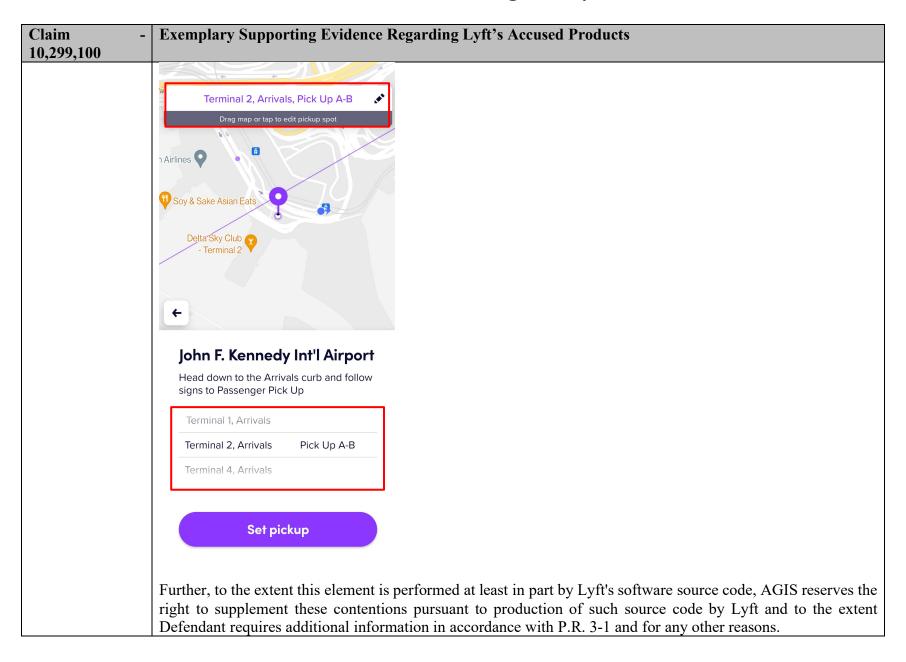
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
of symbols	
includes a search	
of the coordinates	
of the portions of	
the display	
corresponding to	
the symbols in the	
set for coordinates	
located nearest to	
the coordinates of	
the selected	
portion of the	
display, and	
wherein the	
selected facility	
symbol is	
identified as the	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates of	
the portions of the	
display	
corresponding to	
the symbols.	
18. The method of	
claim 1, further	contributing to the performance of determining coordinates of a location represented by the selected position on
comprising	the map, wherein data associated with the set of symbols include coordinates of locations of entities represented
determining	by the symbols in the set, wherein the search of the set of symbols includes a search of the coordinates of the

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
coordinates of a	locations of the entities represented by the symbols in the set for coordinates located nearest to the coordinates
location	of the location represented by the selected position on the map, and wherein the selected facility symbol is
represented by the selected position	identified as the symbol located nearest to the selected position based on a result of the search of the coordinates of the locations of the entities represented by the symbols.
on the map,	of the locations of the entities represented by the symbols.
wherein data	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
associated with	This element is infiniged inclarity, of in the alternative, under the doctrine of equivalents.
the set of symbols	See claim 1[H] above.
include	
coordinates of	
locations of	
entities	
represented by the	
symbols in the set,	
wherein the	
search of the set	
of symbols	
includes a search	
of the coordinates	
of the locations of the entities	
the entities represented by the	
symbols in the set	
for coordinates	
located nearest to	
the coordinates of	
the location	
represented by the	
selected position	
on the map, and	

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
wherein the	
selected facility	
symbol is	
identified as the	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates of	
the locations of	
the entities	
represented by the	
symbols.	
19. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, further	contributing to the performance of: after identifying the selected facility symbol, displaying an address of the
comprising:	facility represented by the facility symbol.
after identifying	
the selected	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
facility symbol,	
displaying an	See claim 1. The Lyft apps meet this limitation because the Lyft app displays the address for selected entities on
address of the	the display. For example, after Lyft identifies the selected facility symbol (e.g. airport), it displays the address
facility	of the selected facility represented by the facility symbol.
represented by the	
facility symbol.	







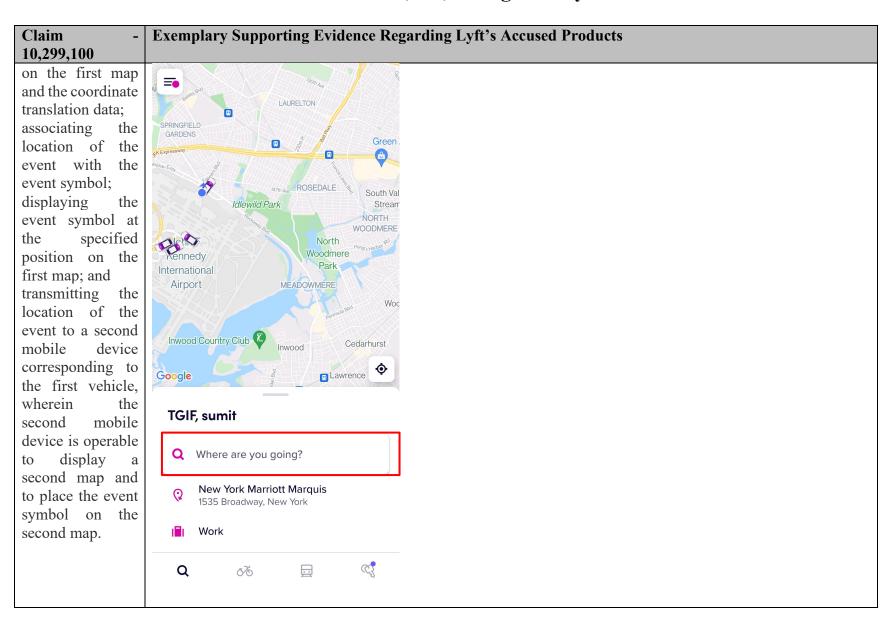
Claim - Exemplary Supporting Evidence Regarding Lyft's Accused Products 10,299,100

20. The method of claim 1. wherein the mobile device is a first mobile device, wherein the map is a first map, and wherein the method further comprises: receiving second user input via user interaction with a second portion of the display of the mobile first device, the second input user specifying position on the first map of an event symbol representing an event; and based on the second user input: determining coordinates of a location of the event based on coordinates of the specified position

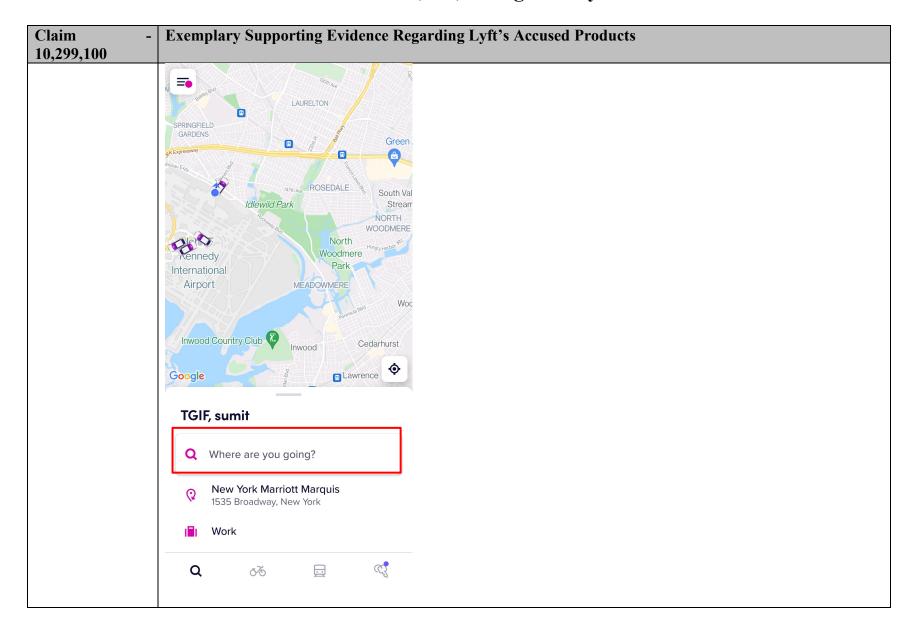
The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: the mobile device is a first mobile device, wherein the map is a first map, and wherein the method further comprises: receiving second user input via user interaction with a second portion of the display of the first mobile device, the second user input specifying a position on the first map of an event symbol representing an event; and based on the second user input: determining coordinates of a location of the event based on coordinates of the specified position on the first map and the coordinate translation data; associating the location of the event with the event symbol; displaying the event symbol at the specified position on the first map; and transmitting the location of the event to a second mobile device corresponding to the first vehicle, wherein the second mobile device is operable to display a second map and to place the event symbol on the second map.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

See claim 1. The Lyft app meets this limitation because the user can provided user input in the Lyft app to specify multiple pickup/stop/destinations and the corresponding symbol/location will be placed on the map. This symbol/location is communicated to the driver's Lyft app. For example, through the Lyft app, a passenger inputs a destination address by clicking on the map interface. This input specifies a position on the map and is displayed as a symbol after the user inputs it. Further, this location is transmitted to the driver and is displayed as a symbol on the driver's app.



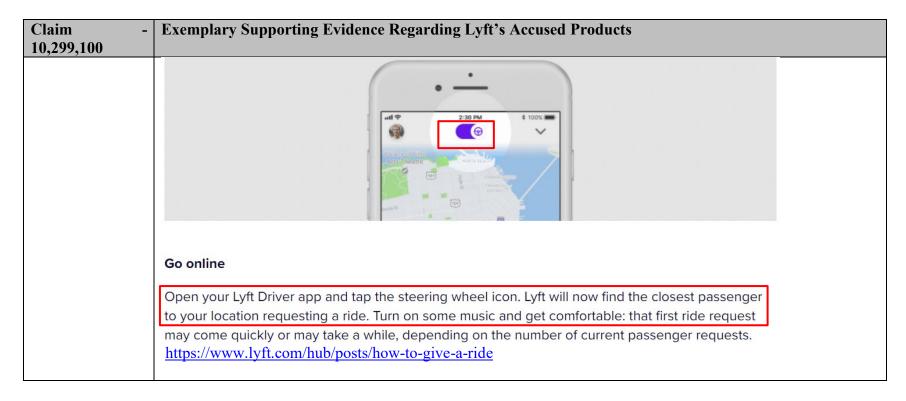
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
21. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 20, wherein	contributing to the performance of: the coordinates of the location of the event are determined based on
the coordinates of	coordinates of the position of the event symbol on the map and the coordinate translation data.
the location of the	
event are	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
determined based	
on coordinates of	See claim 20. For example, upon information and belief, the coordinates of the destination address ("event")
the position of the	are determined by the symbol placed by the passenger on the map in the Lyft app.
event symbol on	
the map and the	
coordinate	
translation data.	

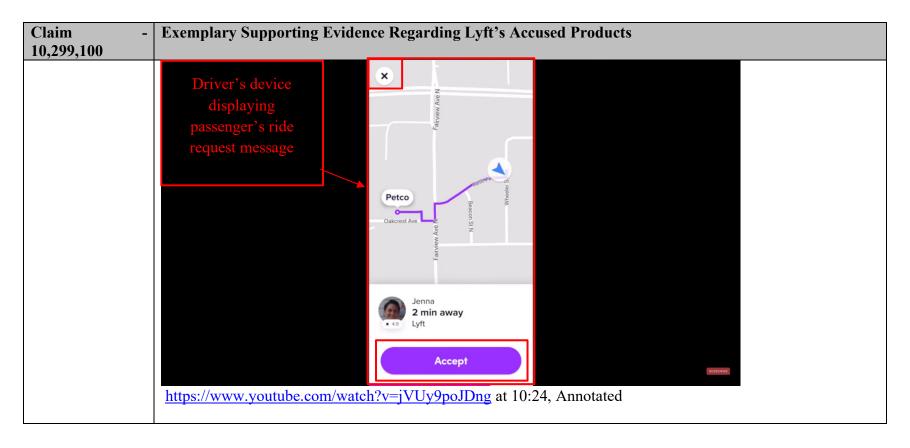


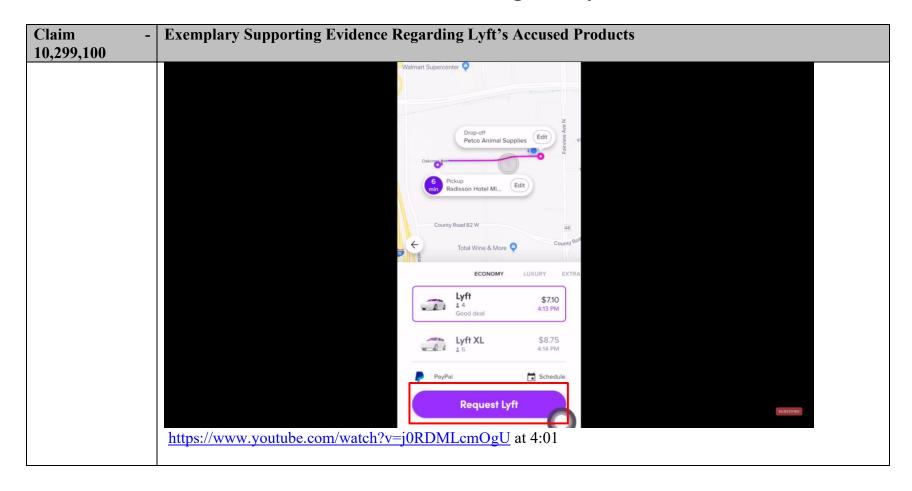
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
22. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 20, wherein	contributing to the performance of: the coordinates of the location of the event are determined based on
the coordinates of	coordinates of the second portion of the display and the coordinate translation data.
the location of the	
event are	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
determined based	See alaim 20.21 Femananala yang information and balief the conditions of the destination address
on coordinates of	See claim 20-21. For example, upon information and belief, the coordinates of the destination address ("event") are determined by the symbol placed in the second portion of the map by the passenger in the Lyft
the second portion of the display and	
the coordinate	app.
translation data.	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
translation data.	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
23. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, wherein	contributing to the performance of: wherein the map is first map, wherein the coordinate translation data are first
the map is first	coordinate translation data, wherein an area depicted in the first map represents a first portion of an area depicted
map, wherein the	in a second map, and wherein the method further comprises: receiving, from a server, a third map representing a
coordinate	second portion of the area depicted in the second map and second coordinate translation data correlating
translation data	coordinates of positions on the second map with corresponding coordinates of geographical locations.
are first	
coordinate	See claim 1. On information and belief, the Lyft app presents a map display to a user which can include multiple
translation data,	maps. The multiple maps can include multiple portions of the maps and can be modified via user interaction with
wherein an area	the map or automatically based on information received from the Lyft app or Lyft server(s) or based on changes
depicted in the	in location/orientation/view. The data used to present the maps can include multiple sets of coordinates.
first map	
represents a first	
portion of an area	
depicted in a	

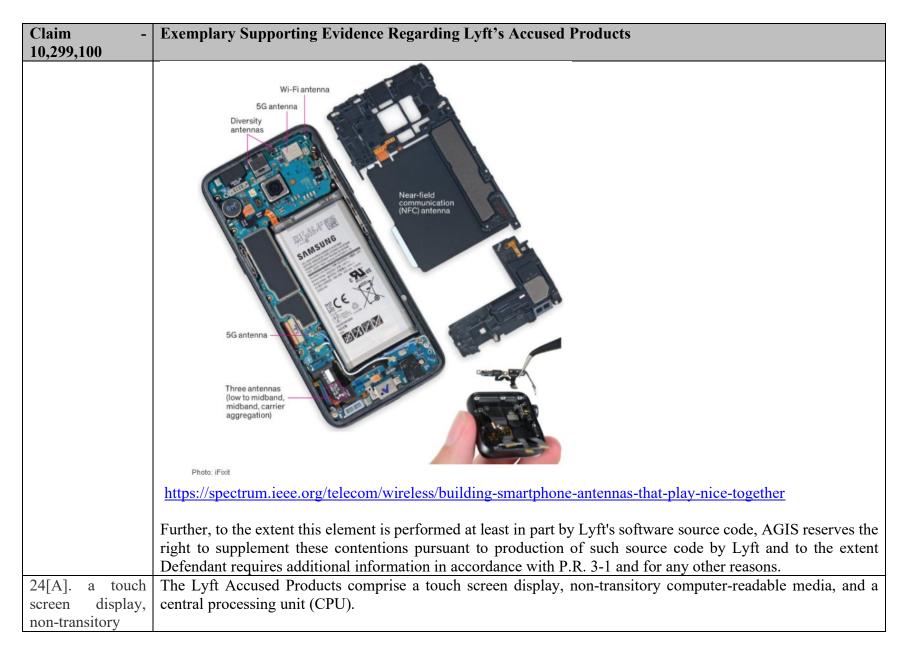
Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
second map, and	
wherein the	
method further	
comprises:	
receiving, from a	
server, a third	
map representing	
a second portion	
of the area	
depicted in the	
second map and	
second coordinate	
translation data	
correlating	
coordinates of	
positions on the	
second map with	
corresponding	
coordinates of	
geographical	
locations.	
24[P]. A system	The Lyft Accused Products comprise a system comprising a mobile device contained in a portable housing, the
comprising a	mobile device comprising
mobile device	
contained in a	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
portable housing,	
the mobile device	
comprising:	riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to
	request, view, and track locations of passengers/riders using real-time maps and communications via mobile
	phones to establish a wireless communication network.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. This process is facilitated through drivers' and passengers' smart devices including but not limited to smartphones and tablets having Lyft and Lyft Driver app installed. The smart devices of passengers and drivers are contained in a portable housing.
	Lyft Driver app We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for
	passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft









Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
computer- readable media,	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
and a central processing unit (CPU);	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprises a display, processor and storage media.
	Combining multiple components into a single chip saves on space, cost, and power consumption.
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating
	system to detecting when you press the power off button. SoCs connect to other components too,
	such as cameras, a display, RAM, flash storage, and much more.
	The list below contains the most common components that you will find inside a smartphone System-
	on-a-Chip. We're going to cover a few of the most important ones later on in this article.
	Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the
	Android OS and most of your apps.
	· Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an
	app's user interface and 2D/3D gaming.
	· Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files.
	· Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a
	CPU. Includes decompressing music files and analyzing gyroscope sensor data.
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine
	learning (AI) tasks. These include voice recognition and camera processing.
	· Video encoder/decoder — Handles the power-efficient conversion of video files and
	formats.
	· Modems — Converts wireless signals into data your phone understands. Components
	include 4G LTE, 5G, WiFi, and Bluetooth modems.

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
24[B]. a mobile	The Lyft Accused Products comprise a mobile device transmitter communicatively coupled to the CPU.
device transmitter	
communicatively	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
coupled to the	
CPU;	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a transmitter module (antenna) coupled to a processor to send data.
	1. Antenna
	1. Afficilia
	Antenna is used to receive and transmit radio frequency. It is inbuilt in the cabinet of the
	mobile phone. These are called inbuilt antenna.
	http://www.mobilecellphonerepairing.com/mobile-phone-parts.html

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	Mobile phone contents
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone:
	Radio frequency - receiver and transmitter
	Digital signal processing Analogue / digital conversion
	Control processor
	SIM or USIM card
	Power control and battery
	Source: https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
24[C]. a mobile device receiver	The Lyft Accused Products comprise a mobile device receiver communicatively coupled to the CPU.
communicatively coupled to the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
CPU;	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a receiver module (antenna) coupled to a processor to receive data.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
	1. Antenna
	Antenna is used to receive and transmit radio frequency. It is inbuilt in the cabinet of the
	mobile phone. These are called inbuilt antenna. http://www.mobilecellphonerepairing.com/mobile-phone-parts.html
	Mobile phone contents
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone:
	Radio frequency - receiver and transmitter
	Digital signal processing Analogue / digital conversion
	Control processor
	SIM or USIM card
	Power control and battery
	Source: https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
24[D]. a global positioning system (GPS) receiver,	The Lyft Accused Products comprise a global positioning system (GPS) receiver, communicatively coupled to the CPU, configured to obtain geographical coordinates corresponding to a geographical location of the mobile device.
communicatively coupled to the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
CPU, configured to obtain geographical coordinates	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a GPS module coupled to a processor to determine the location of the smart device.
corresponding to a geographical	You must have seen that every Android and iOS device in today's age comes with
a geographical location of the mobile device;	GPS right inside it. This is one feature that will be there in every smartphone no
moone device,	matter what the price of that device might be. And that is because of the fact that
	GPS is the most basic yet most useful feature on every smartphone.
	Just for information, the GPS stands for Global Positioning System and it provides
	accurate geolocation and time information for every equipment that is equipped
	with a GPS receiver. Now, the best example of using GPS is with services such as
	Google Maps, Apple Maps, and others where you can see where exactly you are right
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS
	satellite.
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
24[E]. the CPU configured to execute instructions to perform operations comprising:	See Claim 1[A] above.
24[F]. associating the mobile device with an identifier, wherein the identifier corresponds to a network participant	See Claim 1[B] above.
24[G]. determining, by the CPU, a device location corresponding to the geographical location of the mobile device based on the geographical coordinates obtained by the GPS receiver located within the mobile device;	See Claim 1[C] above.

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
24[H]. receiving,	See Claim 1[D] above.
from a server,	
mapping data	
including a map	
and coordinate	
translation data	
correlating	
coordinates of	
positions on the	
map with	
corresponding	
coordinates of	
geographical	
locations	
24[I]. receiving,	See Claim 1[E] above.
from a server,	
location data	
indicating vehicle	
locations of one	
or more vehicles	
24[J]. marking the	See Claim 1[F] above.
map with a	
plurality of	
symbols	
comprising: a	
participant	
symbol	
corresponding to	
the device	
location, one or	
more facility	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 391 of 1092

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
symbols	
_	
corresponding to	
respective facility locations of one	
or more facilities,	
and one or more	
vehicle symbols	
corresponding to	
respective vehicle	
locations of the	
one or more	
vehicles, wherein	
marking the map	
comprises:	
24[K].	See Claim 1[G] above.
determining,	
based at least in	
part on the vehicle	
locations and the	
coordinate	
translation data,	
positions on the	
map	
corresponding to	
the vehicle	
locations,	
displaying the	
map on the	
display of the	
mobile device,	
and	

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
placing the	
vehicle symbols	
on the map at the	
determined	
positions	
corresponding to	
the vehicle	
locations;	
24[L]. responsive	See Claim 1[H] above.
to user selection	
of a portion of the	
display	
corresponding to	
a position on the	
map, identifying a	
selected facility	
symbol based on	
the selected	
position,	
comprising:	
initiating a search	
of a set of	
symbols	
including the	
facility symbols	
for a symbol	
located nearest to	
the selected	
position and,	
based on a result	
of the search,	

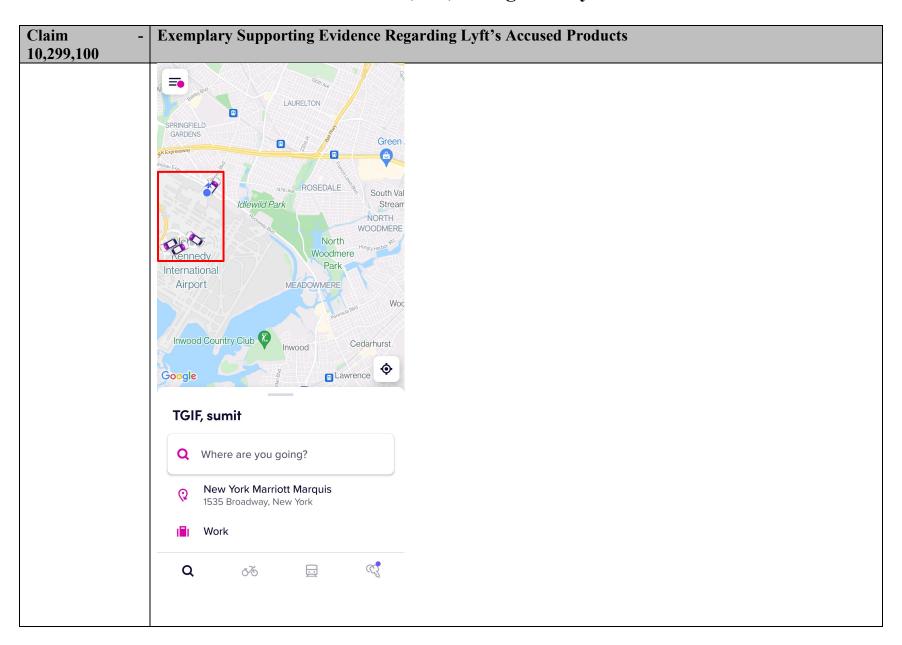
Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
identifying the	
selected facility	
symbol as the	
symbol located	
nearest to the	
selected position;	
24[M]. after	See Claim 1[I] above.
receiving user	
input on the touch	
screen display,	
transmitting, by	
the mobile device	
transmitter, first	
information to a	
first vehicle of the	
one or more	
vehicles; and	
24[N]. after	See Claim 1[J] above.
transmitting the	
first information	
to the first	
vehicle,	
receiving, at the	
mobile device	
receiver, second	
information	
corresponding to	
the first vehicle	
and displaying the	
received second	
information on	

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
the touch screen	
display of the	
mobile device,	
24[O]. wherein	See Claim 1[K] above.
the mobile device	
does not have	
access to a phone	
number	
associated with a	
computing device	
corresponding to	
the first vehicle,	
an Internet	
Protocol (IP)	
address	
associated with	
the computing	
device	
corresponding to	
the first vehicle,	
and an e-mail	
address	
associated with	
the computing	
device	
corresponding to	
the first vehicle.	C Claim 5 -1
	See Claim 5 above.
claim 24, wherein	
the operations	
further comprise:	

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
receiving, from a	
server, at the	
mobile device	
receiver, updated	
respective vehicle	
locations of the	
one or more	
vehicles; and	
updating, based	
on the received	
updated vehicle	
locations and the	
coordinate	
translation data,	
positions of the	
one or more	
vehicle symbols	
on the map	
displayed on the	
touch screen	
display.	
	See Claim 10 above.
claim 24, wherein	
the operations	
further comprise:	
communicating,	
by the mobile	
device	
transmitter, the	
identifier to a	
server; and	

Claim -	Exemplary Supporting Evidence Regarding Lyft's Accused Products
10,299,100	
joining a	
communication	
network after the	
communication of	
the first identifier	
to the server.	
27. The system of	See Claim 11 above.
claim 26, wherein	
the identifier is a	
first identifier,	
and wherein the	
communication	
network	
comprises one or	
more	
communication	
devices	
corresponding,	
respectively, to	
one or more	
second vehicles,	
and wherein each	
of the one or more	
communication	
devices is	
associated with a	
respective second	
identifier.	
28. The system of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 27, wherein	contributing to the performance of: the operations further comprise: receiving, by the mobile device receiver, the
	second identifiers corresponding to one or more communication devices; and displaying, on the map displayed

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
the operations further comprise:	on the touch screen display, one or more second vehicle symbols corresponding to the second identifiers corresponding to the second vehicles.
receiving, by the mobile device receiver, the	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
second identifiers corresponding to one or more communication devices; and displaying, on the map displayed on the touch screen display, one or more second vehicle symbols corresponding to the second identifiers corresponding to	For example, before a passenger requests for a ride, the Lyft app displays symbols corresponding to multiple vehicles based on their location near the passenger's location. Therefore, Lyft's servers fetch identifiers and locations of the drivers and their vehicles and display the drivers as symbols on the passenger's mobile device.
the second vehicles.	



Exemplary Supporting Evidence Regarding Lyft's Accused Products
Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
See Claim 12 above.
The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
contributing to the performance of: The system of claim 24, wherein: transmitting the first information to the first
vehicle comprises transmitting data to a server using an Internet Protocol; the data transmitted to the server includes the first information and a second identifier corresponding to a second network participant associated

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
transmitting the first information to the first vehicle comprises	with the computing device corresponding to the first vehicle; the second information corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol; and an IP address of the server is accessible to the mobile device.
transmitting data to a server using	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
an Internet Protocol; the data transmitted to the	passengers' and drivers' mobile devices using an Internet Protocol. All information including but not limited to the location information and the identifier are transmitted to the Lyft servers via Internet Protocol.
the first information and a	Lyft Driver app
second identifier corresponding to a second network	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
participant associated with the computing	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
device corresponding to the first vehicle;	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
the second information corresponding to	What is Lyft?
the first vehicle is transmitted by the	Lyft is a platform that connects drivers with individuals and organizations that need rides.
server to the mobile device	https://www.lyft.com/drive-with-lyft
using the Internet Protocol; and	

Claim - 10,299,100	Exemplary Supporting Evidence Regarding Lyft's Accused Products
an IP address of	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the
the server is	right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
accessible to the	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
mobile device.	
31. The system of	See claim 30 above.
claim 30,	
wherein:	
the server stores	
an IP address of	
the computing	
device associated	
with the second	
network	
participant	
identified by the	
second identifier;	
and	
the server	
transmits the first	
information to the	
computing device	
corresponding to	
the first vehicle in	
a message	
addressed to the	
stored IP address	
of the computing	
device	
corresponding to	
the first vehicle.	

Based on information presently available, AGIS Software Development LLC ("AGIS") contends that Defendant Lyft Technologies Inc. (collectively "Lyft" or "Defendant") infringes claims 2, 10-13 (the "Asserted Claims") of U.S. Patent No. 8,213,970 (the "'970 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise all versions of the Lyft Application made, used, sold, offered for sale, or otherwise provided, after September 21, 2004. For example, the Accused Products comprise the Lyft application installed on all Android, iOS, Blackberry, and Windows Mobile based mobile devices (*e.g.* smartphones, tablets, laptops, and smart watches), and any variants thereof. AGIS reserves the right to amend this list of Accused Products as discovery progresses.

Lyft directly infringes each of the Asserted Claims by using, importing, testing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. On information and belief, Lyft knows that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

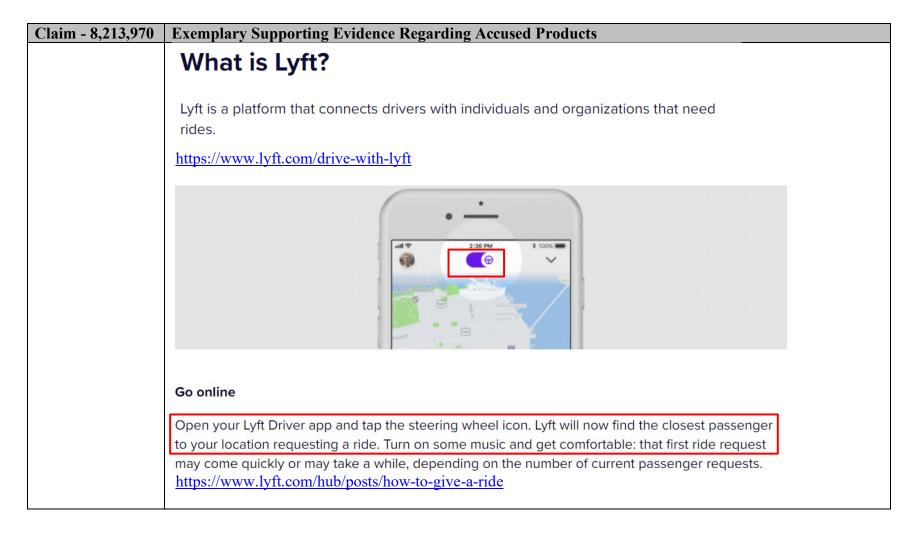
On information and belief, the charted version of the Lyft application is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android, iOS, Blackberry, and Windows Mobile operating systems.

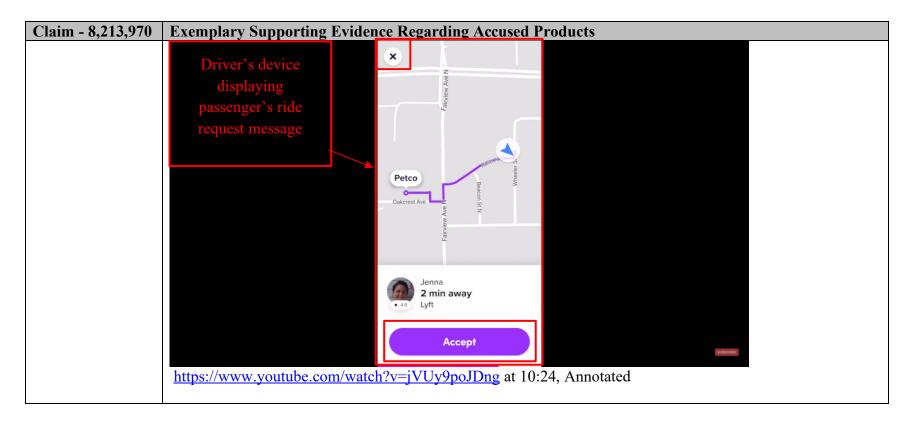
AGIS does not concede that any claims of the '970 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its Accused Products. Accordingly, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS. Furthermore, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including, but not limited to, positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

¹ The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. No. 205 (Lead Case) (E.D. Tex. Oct. 10, 2018) and *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. No. 147 (Lead Case) (E.D. Tex. Dec. 20, 2020). AGIS reserves the right to update its constructions and contentions in view of this Court's claim construction order.

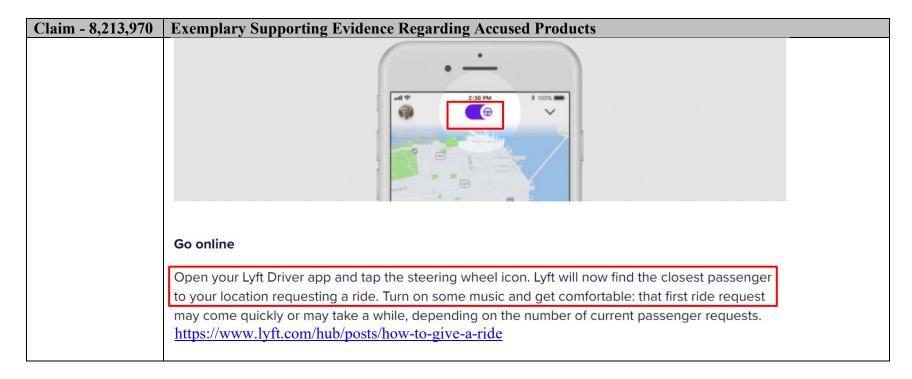
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
(Unasserted) 1[P]. A communication system for transmitting, receiving, confirming receipt, and responding to an electronic message, comprising:	The Lyft Accused Products comprise a communication system for transmitting, receiving, confirming receipt, and responding to an electronic message. Lyft infringe directly and/or indirectly by providing a communication system for transmitting, receiving, confirming receipt, and responding to an electronic message. This element is infringed literally, or in the alternative, under the doctrine of equivalents. For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. The Lyft Driver application receives an electronically transmitted request for a ride message and acknowledges the receipt of the message which triggers a forced message alert that locks the device for a period of time until the driver sends a response message (decline or accept) to clear the locked display ("transmitting, receiving, confirming receipt, and responding to an electronic message"). Lyft Driver application receives, and responding to an electronic message").
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same. https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app

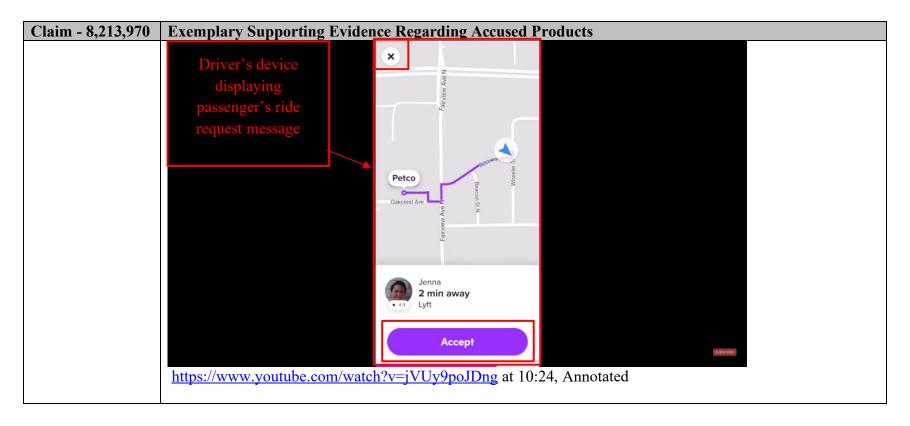


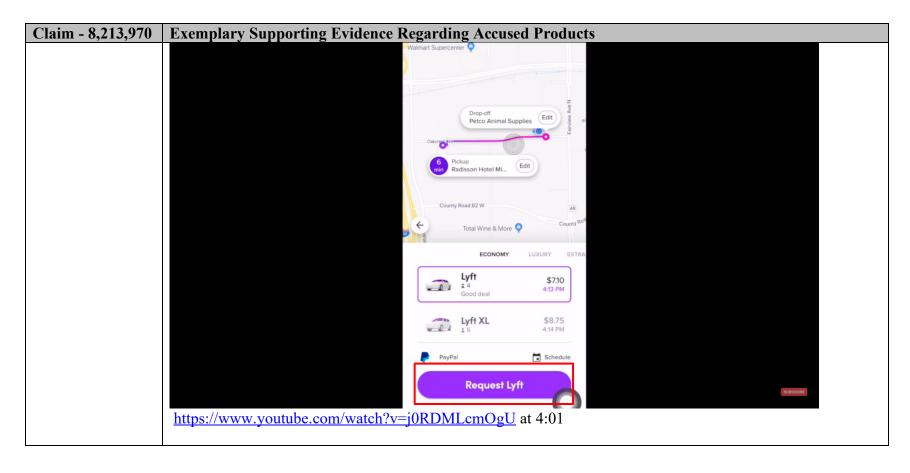


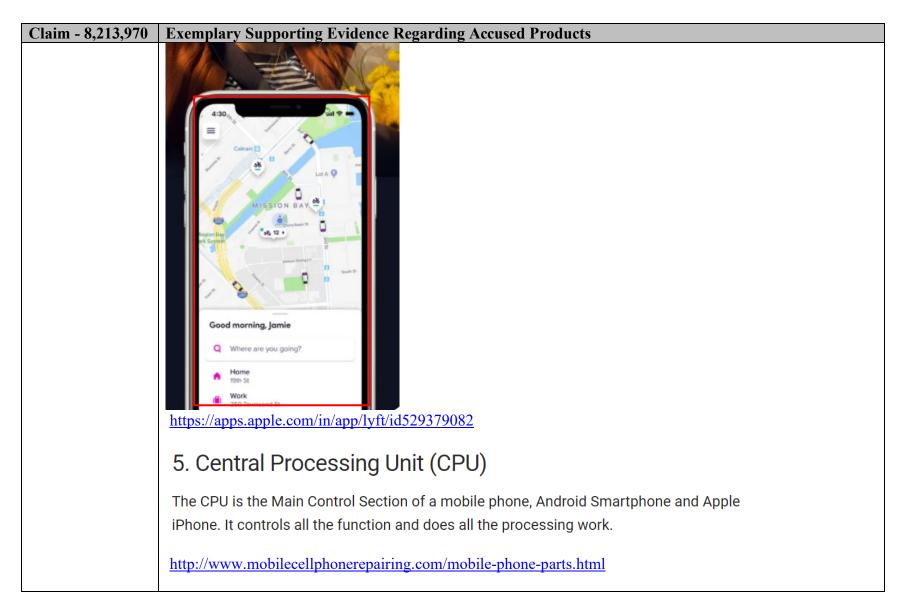
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
0,210,510	-Walmart Supercenter ♀
	N an
	Drop-off Petco Animal Supplies Edit
	Oskerned two
	6 Pickup min Radisson Hotel Mi Edit
	Rousson Florer Ma
	County Road B2 W
	County Ros
	Total Wine & More O
	ECONOMY LUXURY EXTRA
	Lyft \$7.10
	Good deal 4:13 PM
	Lyft XL \$8.75
	± 6 4.14 PM
	PayPal Schedule
	Request Lyft
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01
	nttps://www.youtube.com/waten:v-jokb/vieemogo at 4.01
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[A]. a	The Lyft Accused Products comprise: a predetermined network of participants, wherein each participant has a
predetermined	similarly equipped PDA/cell phone that includes a CPU and a touch screen display a CPU and memory.
network of	1 7
participants,	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
wherein each	
participant has a	For example, Lyft is a network of drivers and passengers where drivers connect with individuals requesting a
similarly equipped	ride. Drivers access the platform using the Lyft Driver app and passengers access the platform using the Lyft

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
PDA/cell phone	app on their respective smart devices including but not limited to smartphones and tablets comprising a
that includes a	display, a processor and a storage media.
CPU and a touch screen display a	
CPU and memory	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for
	passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can
	keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver
	app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need
	rides.
	https://www.lyft.com/drive-with-lyft
	The state of the s

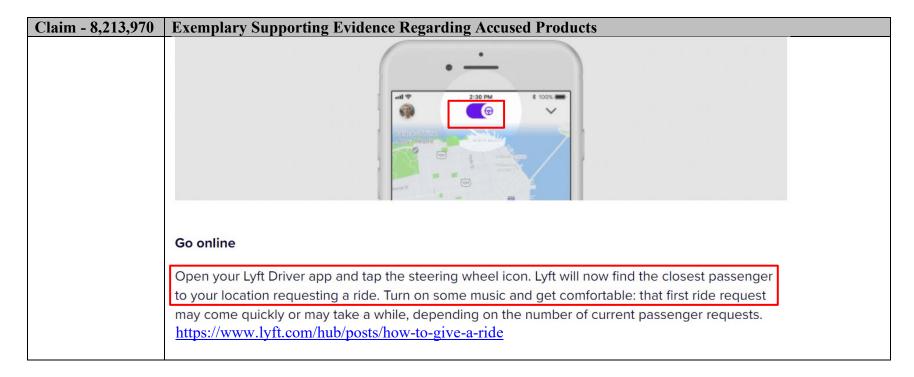


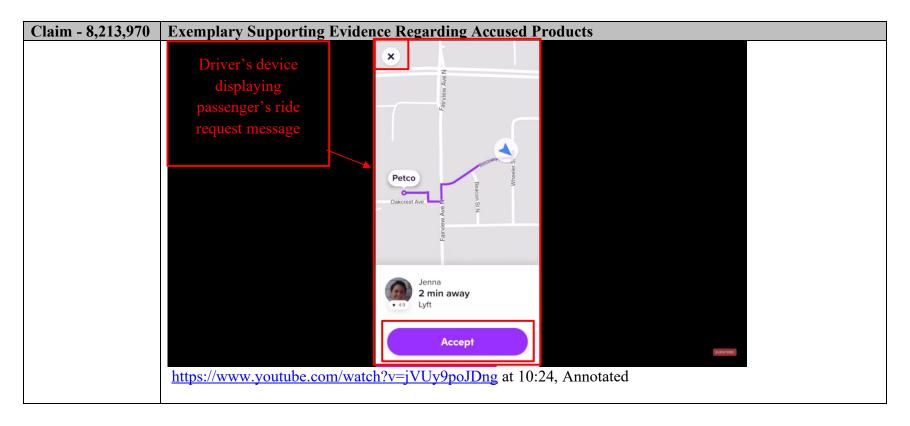






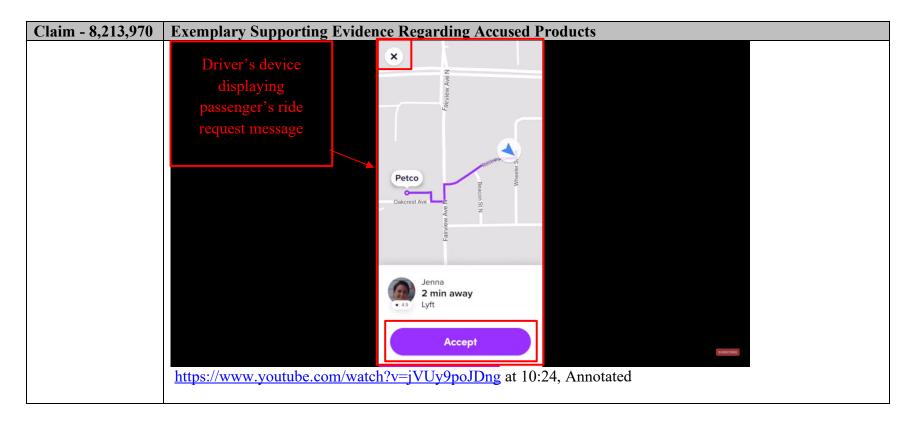
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	6. RAM (<i>Random Access Memory</i>)
	RAM is an erasable memory where older data and information can be erased and new data and information can be stored.
	http://www.mobilecellphonerepairing.com/mobile-phone-parts.html
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[B]. a data	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
transmission	and/or contributing to the performance of: a data transmission means that facilitates the transmission of
means that	electronic files between said PDA/cell phones in different locations
facilitates the	
transmission of	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
electronic files	
between said	For example, Lyft's servers connect passengers to nearby drivers when a request for a ride is placed. The
PDA/cell phones	servers receive a passenger's request for a ride and communicate the request to nearby drivers. The nearby
in different	drivers receive the request for a ride from the passengers to which they either accept or decline the request.
locations	The locations of the passenger and the nearby drivers are different from each other.

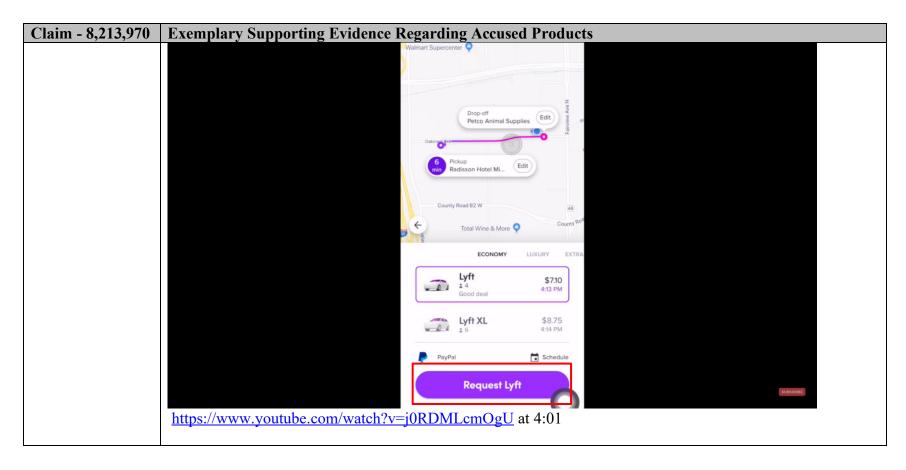


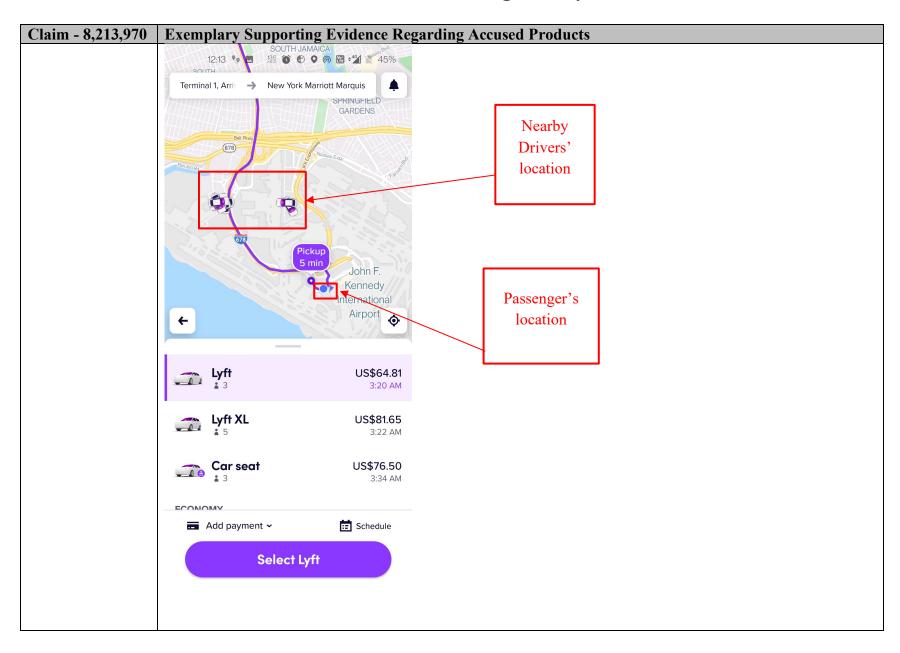


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01 Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[C]. a sender	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
PDA/cell phone	and/or contributing to the performance of: a sender PDA/cell phone and at least one recipient PDA/cell phone
and at least one recipient PDA/cell	for each electronic message
phone for each electronic message	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

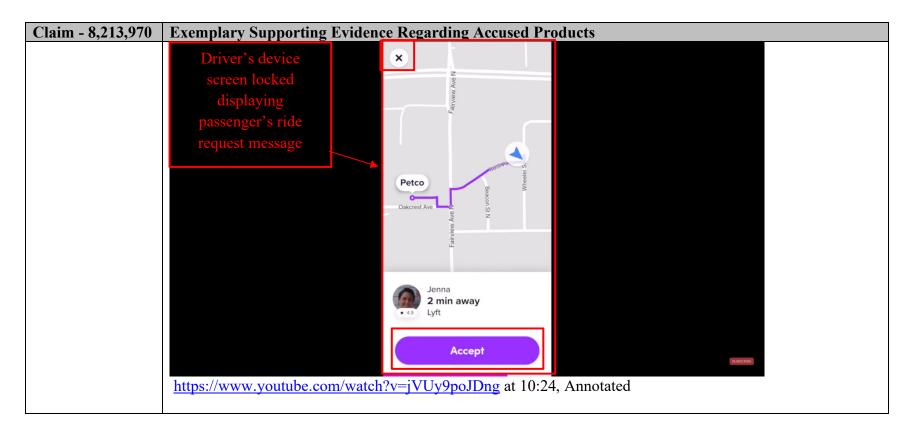
Claim - 8,213,970 **Exemplary Supporting Evidence Regarding Accused Products** For example, Lyft's servers connects the passengers ("sender") to the nearby drivers ("recipient") when a request for a ride is placed. The servers receive a passenger's request for a ride and communicates the request to nearby drivers. The nearby drivers receive the request for a ride from the passengers to which they either accept or decline the request. Go online Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come guickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride

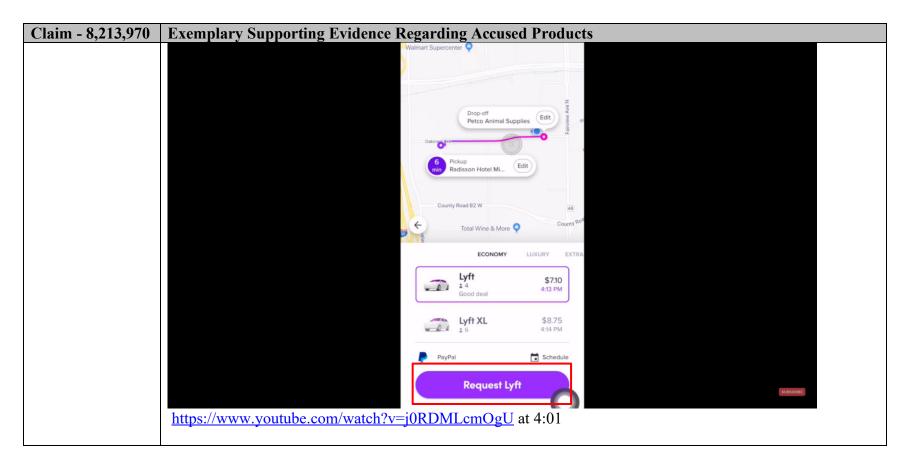


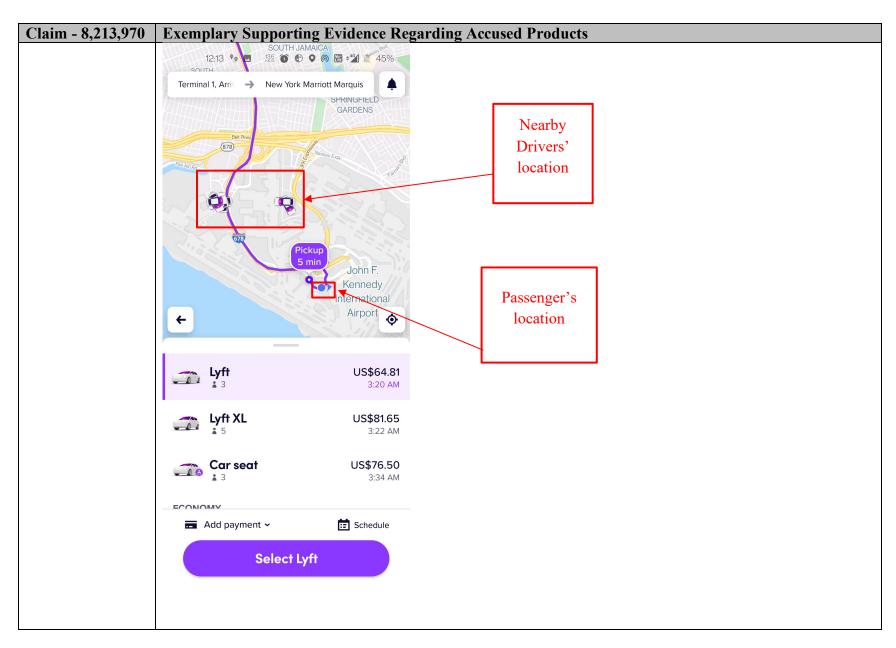




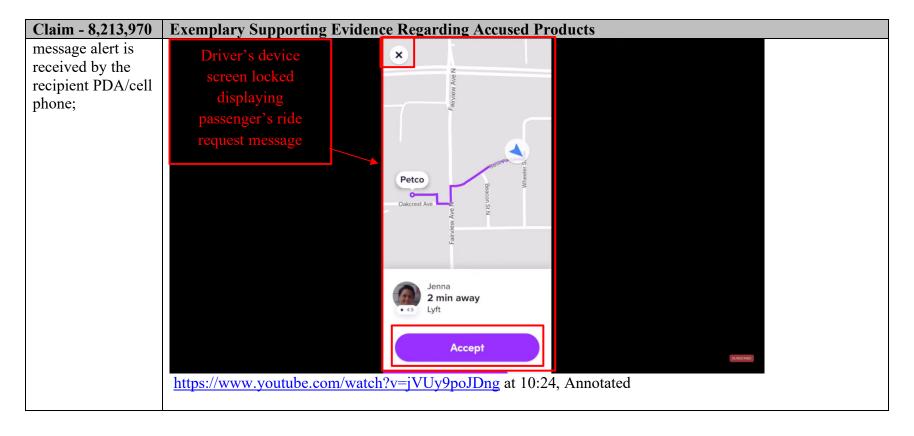
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[D]. a forced	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
message alert	and/or contributing to the performance of: a forced message alert software application program including a list
software	of required possible responses to be selected by a participant recipient of a forced message response loaded on
application	each participating PDA/cell phone
program including	
a list of required	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
possible responses	
to be selected by a	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders
participant	and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request,
recipient of a	view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s)
forced message	and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services
response loaded on	host information related to and instructions for processing user/device/vehicle accounts, location data, and map
each participating	data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by
PDA/cell phone	Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and
	personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's
	personnel.
	The Lyft Driver application receives an electronically transmitted request for a ride which triggers a forced
	message alert that locks the device for a period of time until the driver ("recipient") sends a response message
	(decline or accept) to clear the locked display.

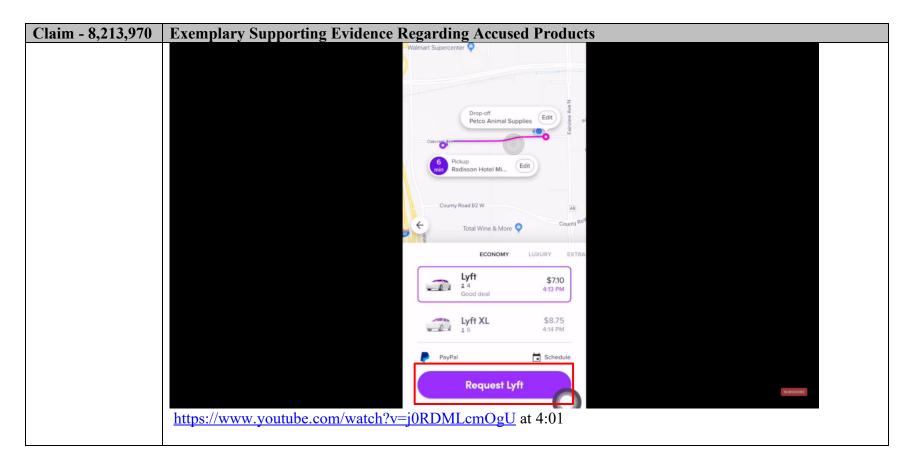


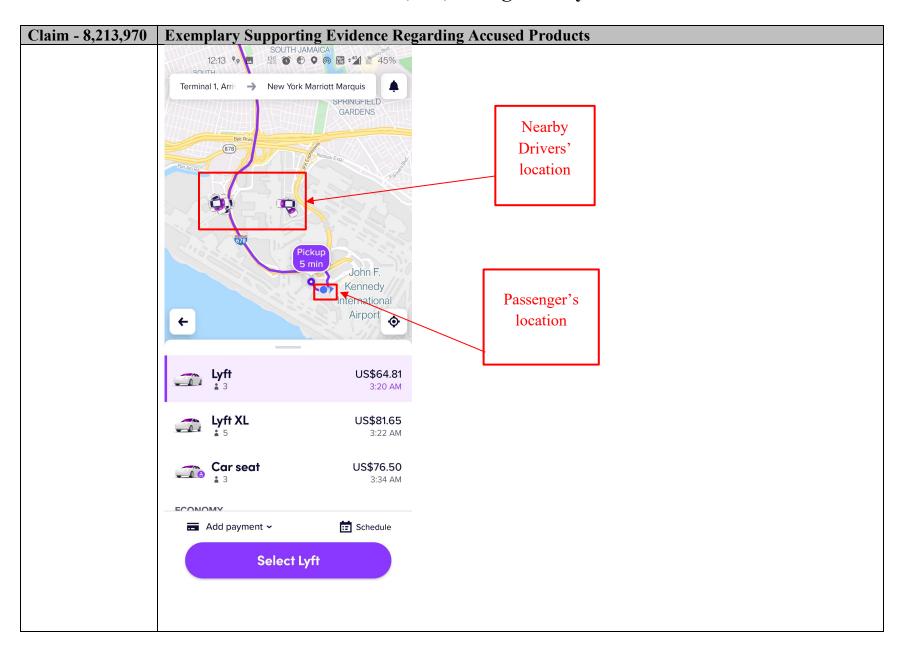




Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[E]. means for attaching a forced message alert software packet to a voice or text message creating a forced message alert that is transmitted by said sender PDA/cell phone to the recipient PDA/cell phone, said forced	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: means for attaching a forced message alert software packet to a voice or text message creating a forced message alert that is transmitted by said sender PDA/cell phone to the recipient PDA/cell phone, said forced message alert software packet containing a list of possible required responses and requiring the forced message alert software on said recipient PDA/cell phone to transmit an automatic acknowledgment to the sender PDA/cell phone as soon as said forced message alert is received by the recipient PDA/cell phone. This element is infringed literally, or in the alternative, under the doctrine of equivalents. For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger which triggers a forced message alert that locks the driver's device for a period of time until the driver ("recipient") sends a response message (decline or accept) to clear the locked display.
message alert software packet containing a list of possible required responses and requiring the forced message alert software on said recipient PDA/cell phone to transmit an automatic acknowledgment to the sender PDA/cell phone as soon as said forced	For example, at the backend, each nearby driver's Lyft app that receives the ride request sends an acknowledgement of receipt to the Lyft server(s). On information and belief, the acknowledgement is communicated to the rider's Lyft app via the Lyft server(s).

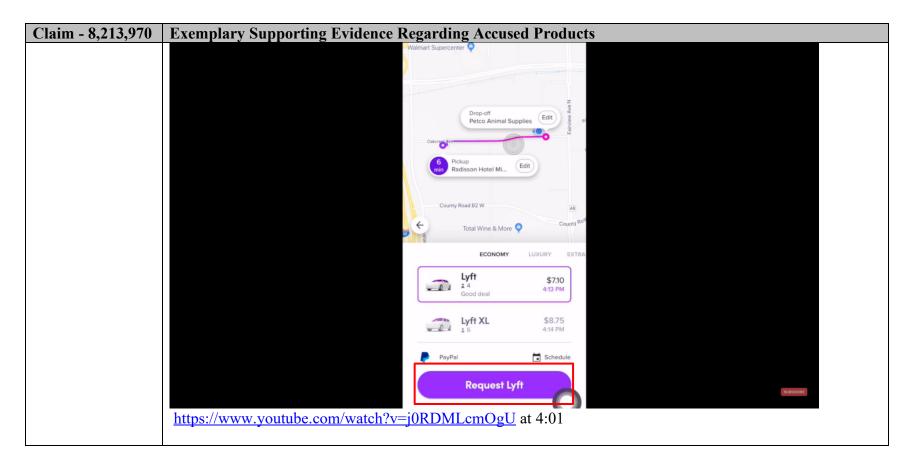


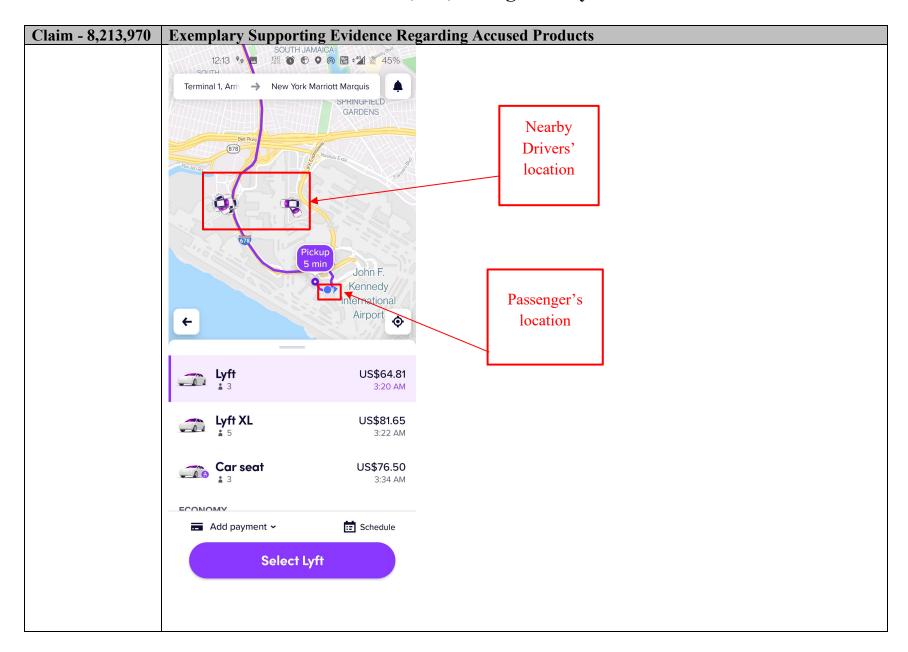


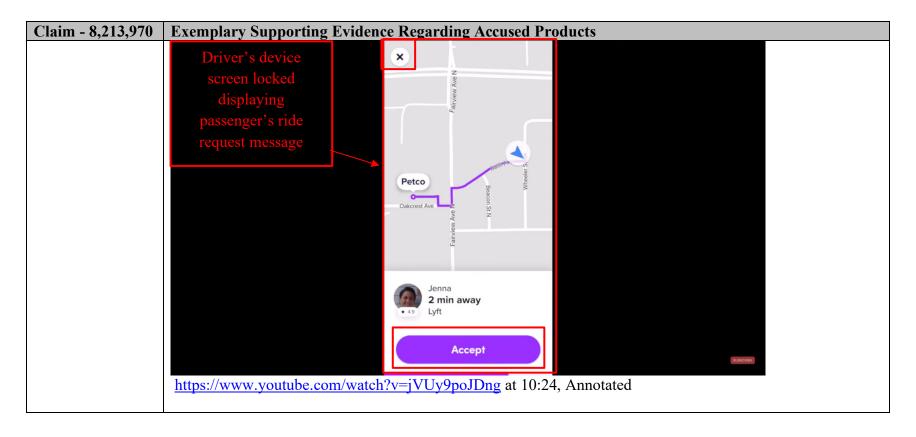


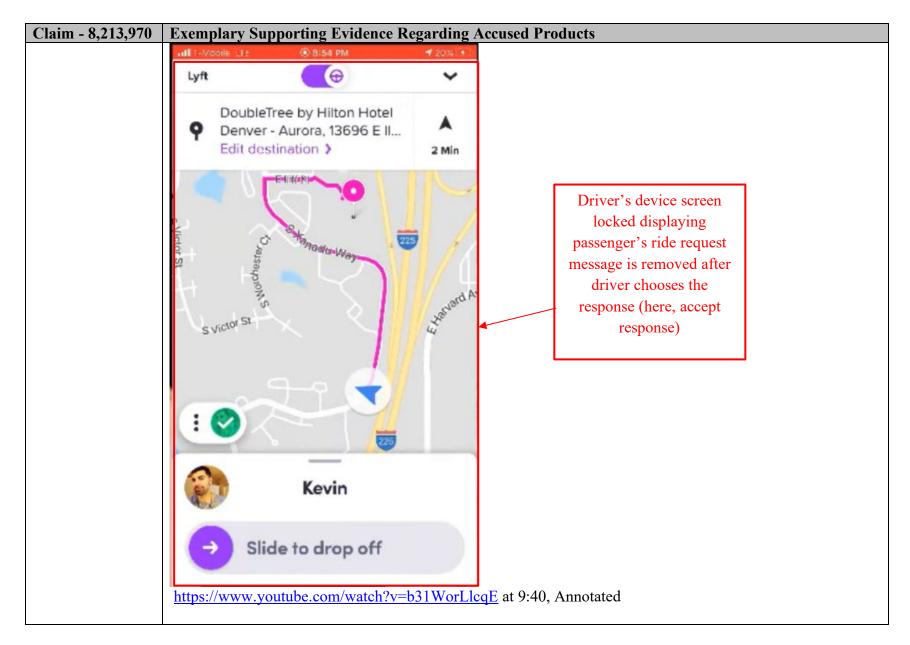
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 429 of 1092

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[F]. means for	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
requiring a	and/or contributing to the performance of: means for requiring a required manual response from the response
required manual	list by the recipient in order to clear recipient's response list from recipient's cell phone display.
response from the	
response list by	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
the recipient in	
order to clear	For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger
recipient's	which triggers a forced message alert that locks the driver's device for a period of time until the driver
response list from	("recipient") sends a response message (decline (cross button) or accept) to clear the locked display.
recipient's cell	
phone display;	

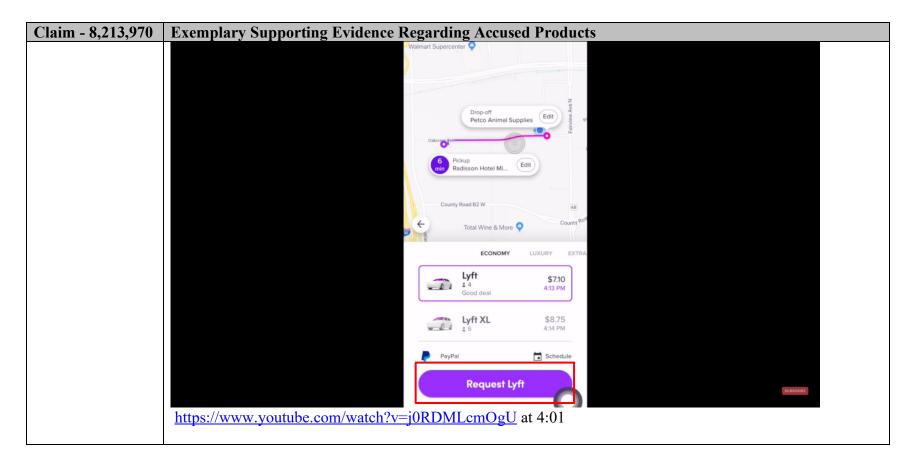


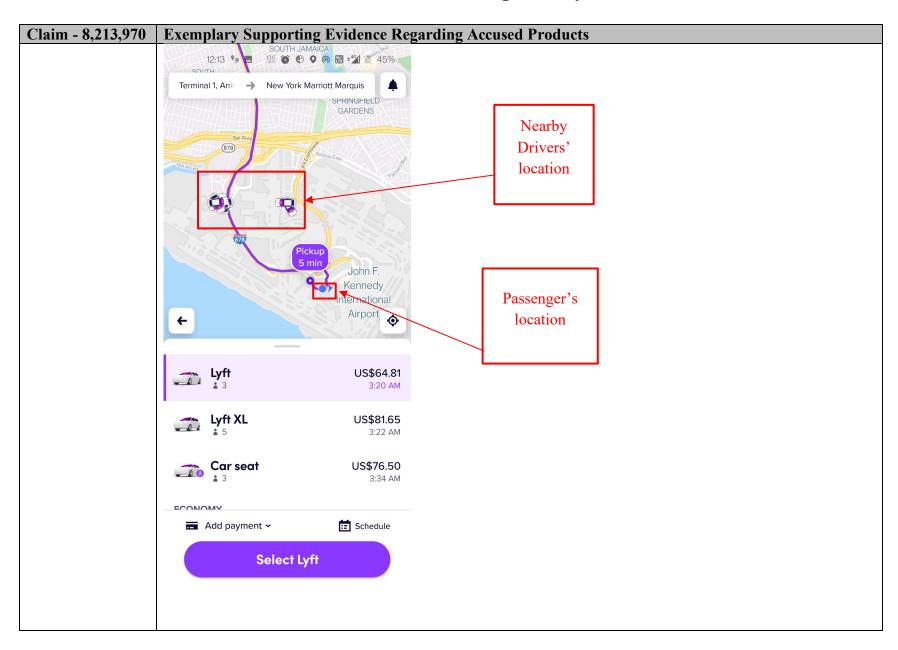


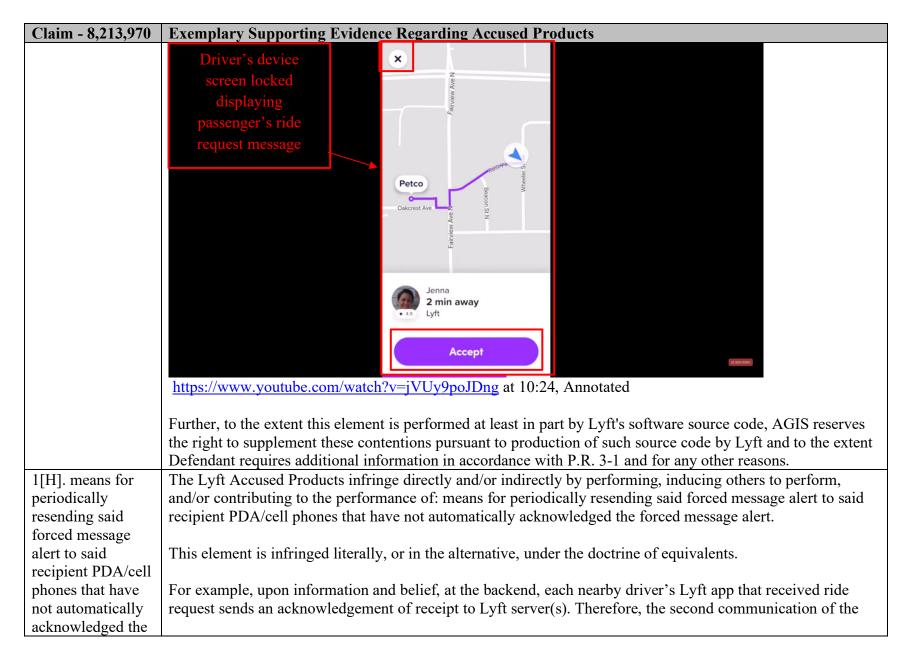


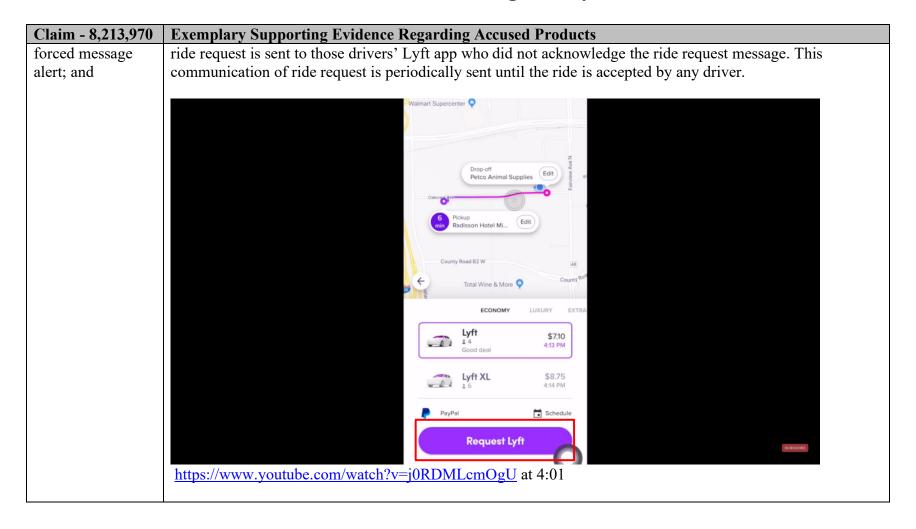


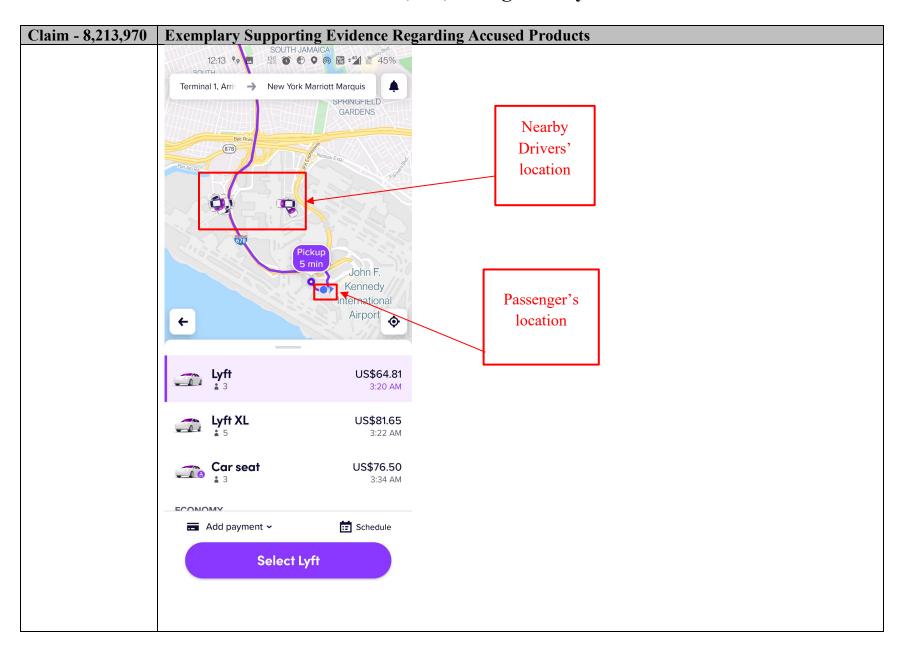
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[G]. means for	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
receiving and	and/or contributing to the performance of: means for receiving and displaying a listing of which recipient
displaying a listing	PDA/cell phones have automatically acknowledged the forced message alert and which recipient PDA/cell
of which recipient	phones have not automatically acknowledged the forced message alert.
PDA/cell phones	
have automatically	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
acknowledged the	
forced message	For example, upon information and belief, at the backend, each nearby driver's Lyft App ("recipient PDA/cell
alert and which	phone") that received ride request sends an acknowledgement of receipt to Lyft server(s).
recipient PDA/cell	
phones have not	
automatically	
acknowledged the	
forced message	
alert;	

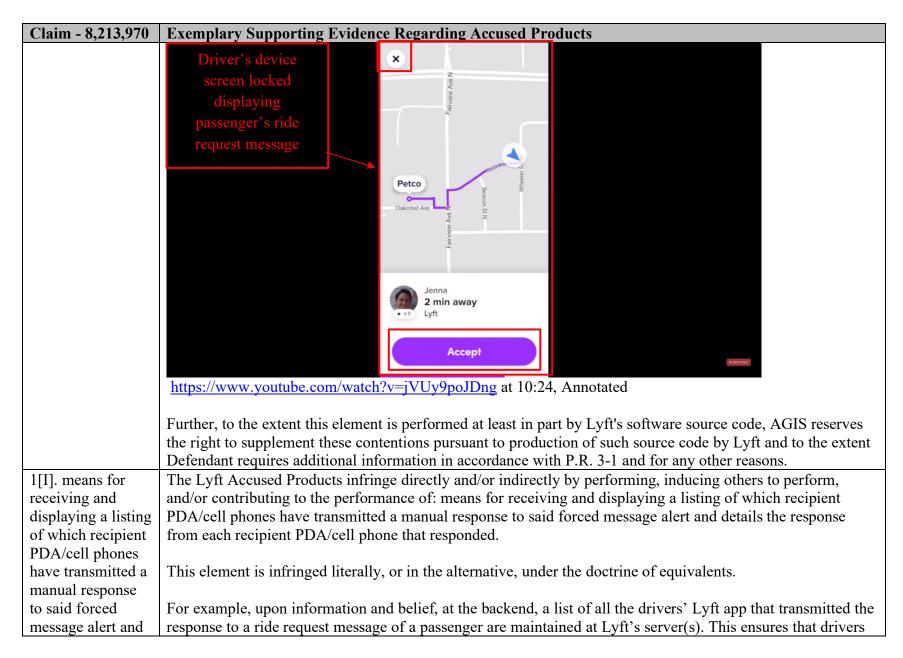


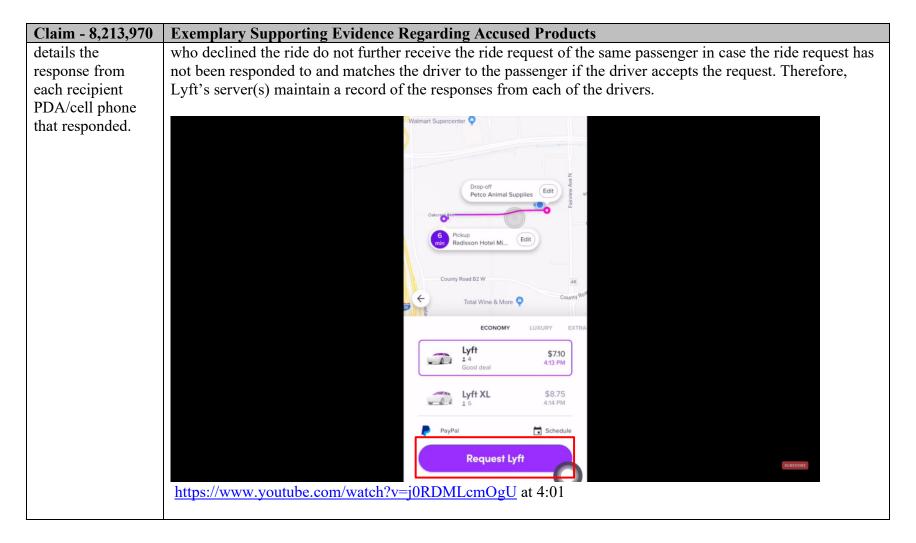


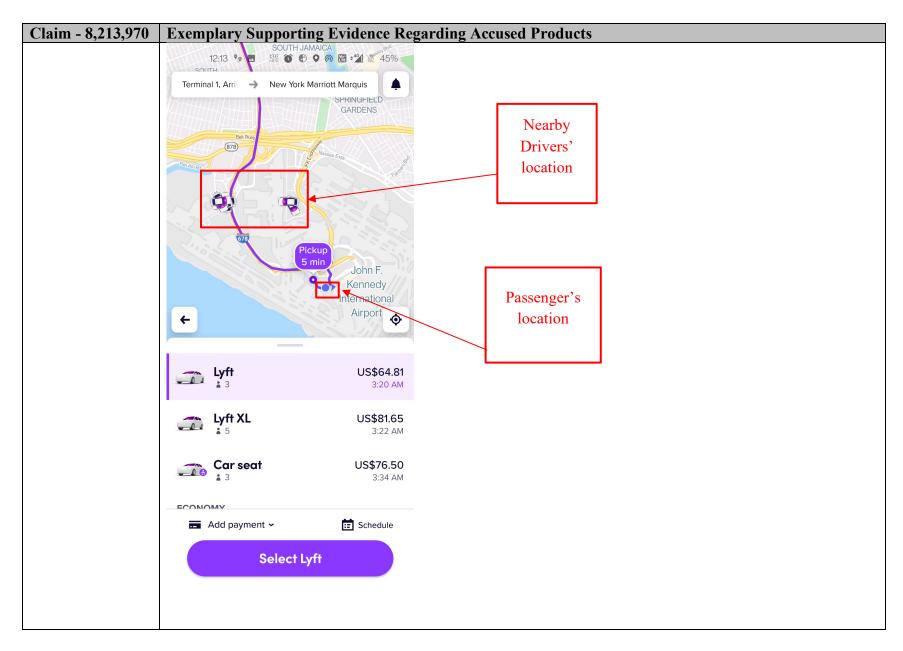


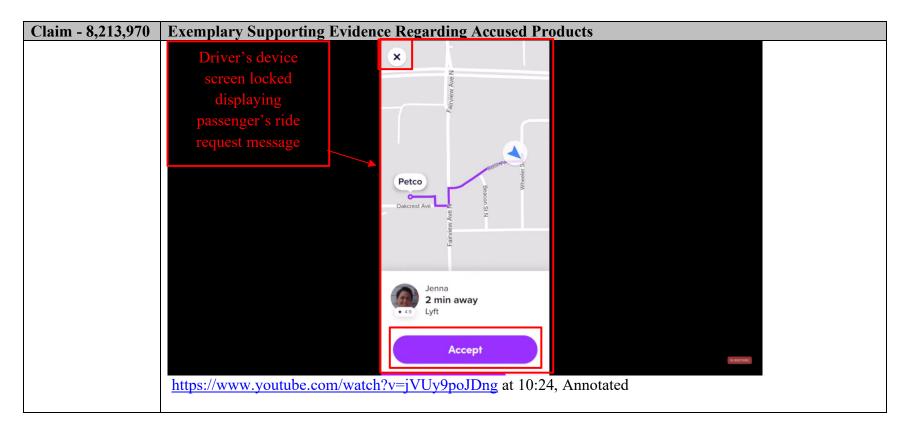


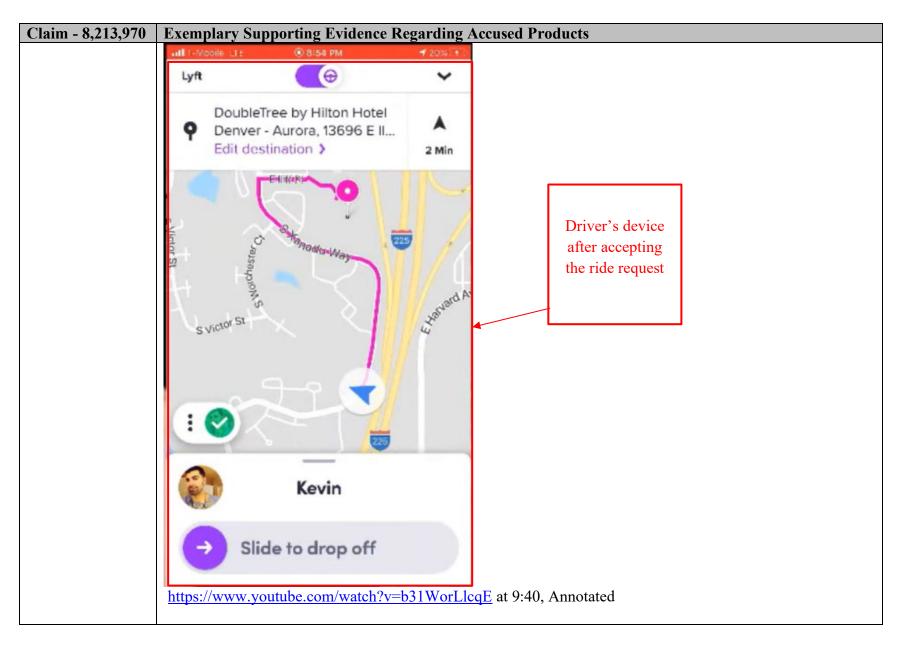




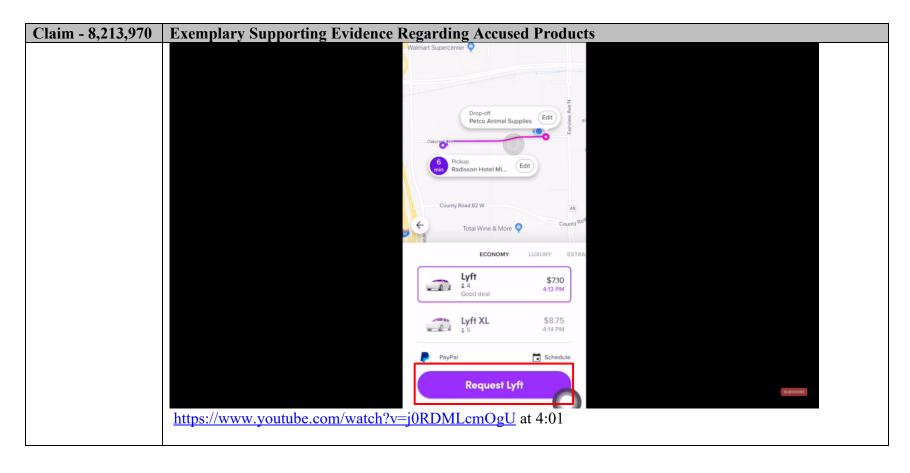


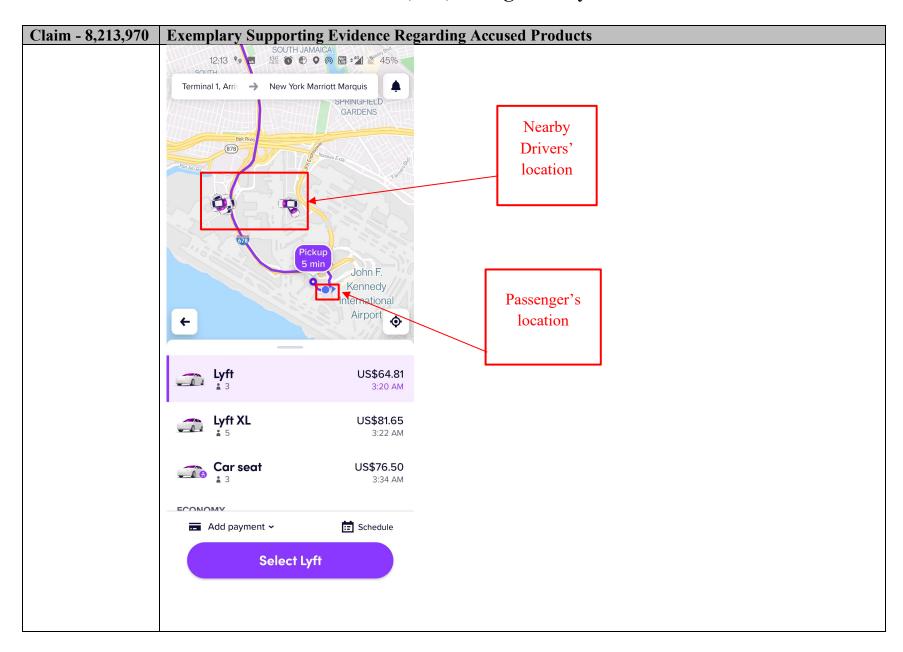


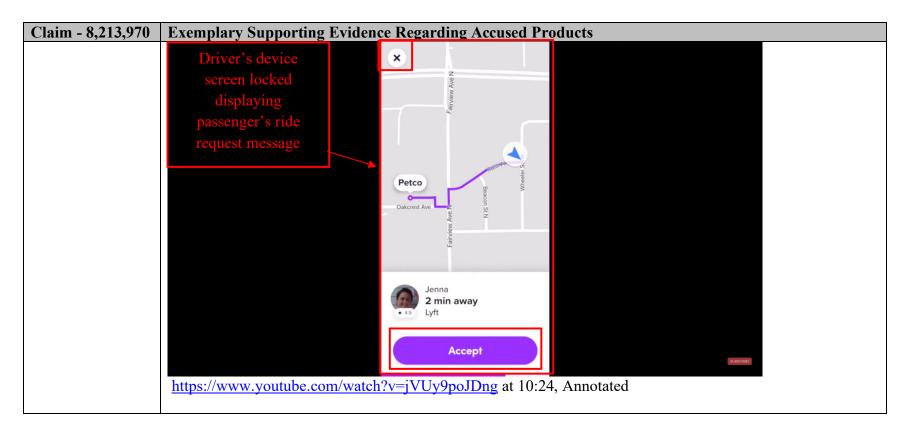


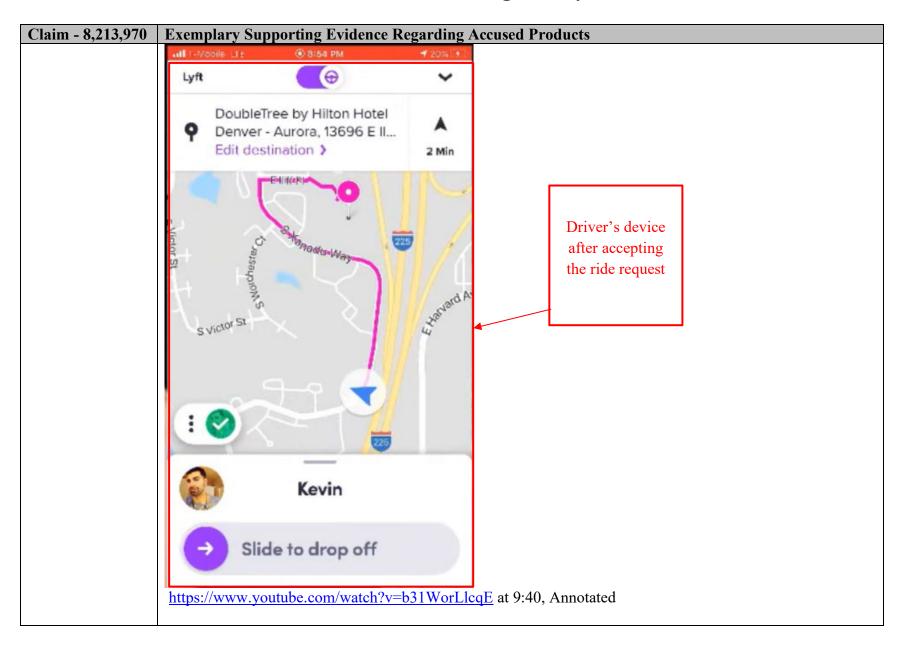


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
2[A]. The system	The Lyft Accused Products comprise the system of claim 1: wherein the forced message alert software
of claim 1,	application program on the recipient PDA/cell phone includes: means for transmitting the acknowledgment of
wherein the forced	receipt to said sender PDA/cell phone immediately upon receiving a forced message alert from the sender
message alert	PDA/cell phone.
software	
application	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
program on the	
recipient PDA/cell	For example, at the backend, the Lyft driver app in each nearby driver's Lyft app that received a ride request
phone includes:	sends an acknowledgement of receipt to Lyft's server and upon information and belief, further to the
means for	passenger's Lyft app.
transmitting the	
acknowledgment	
of receipt to said	
sender PDA/cell	
phone	
immediately upon	
receiving a forced	
message alert from	
the sender	
PDA/cell phone;	

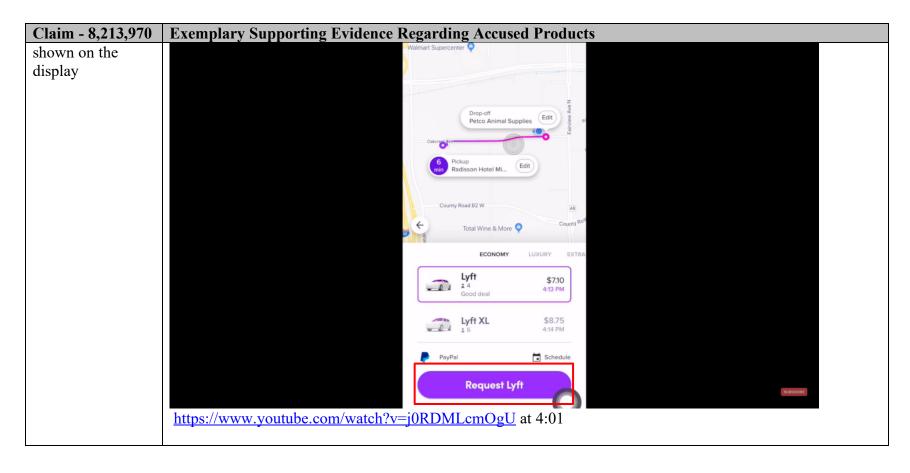


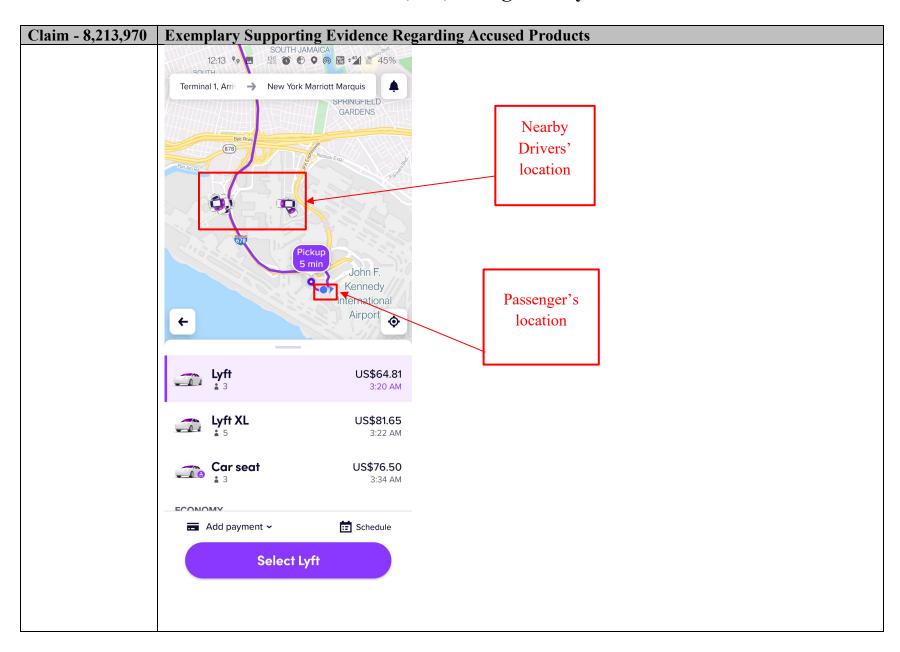


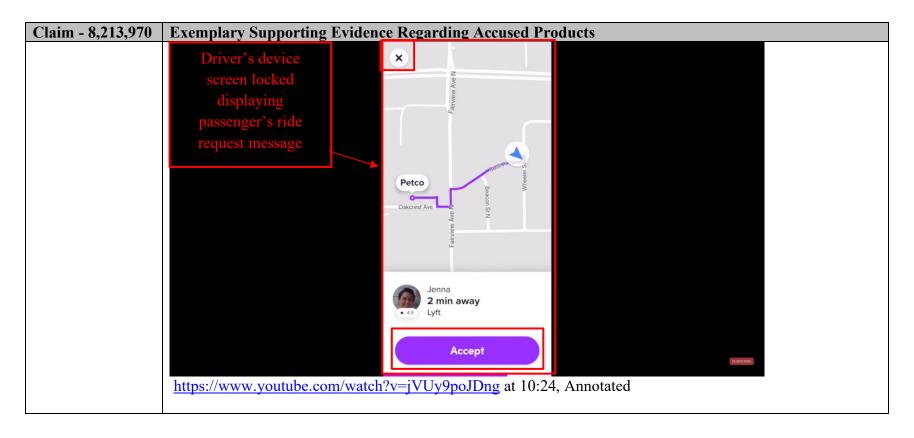


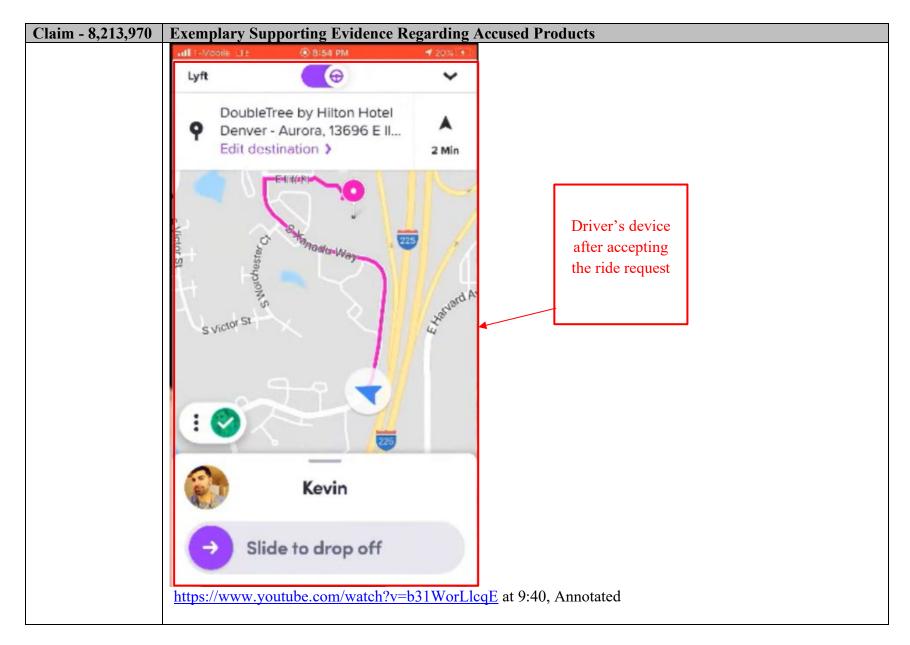


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
2[B]. means for	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
controlling of the	and/or contributing to the performance of: means for controlling of the recipient PDA/cell phone upon
recipient PDA/cell	transmitting said automatic acknowledgment and causing, in cases where the force message alert is a text
phone upon	message, the text message and a response list to be shown on the display of the recipient PDA/cell phone or
transmitting said	causes, in cases where the forced message alert is a voice message, the voice message being periodically
automatic	repeated by the speakers of the recipient PDA/cell phone while said response list is shown on the display
acknowledgment	
and causing, in	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
cases where the	
force message	For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger
alert is a text	which triggers a forced message alert that locks the driver's Lyft app for a period of time until the driver sends
message, the text	a response message (decline (cross button) or accept) to clear the locked display.
message and a	
response list to be	
shown on the	
display of the	
recipient PDA/cell	
phone or causes, in	
cases where the	
forced message	
alert is a voice	
message, the voice	
message being	
periodically	
repeated by the	
speakers of the	
recipient PDA/cell	
phone while said	
response list is	

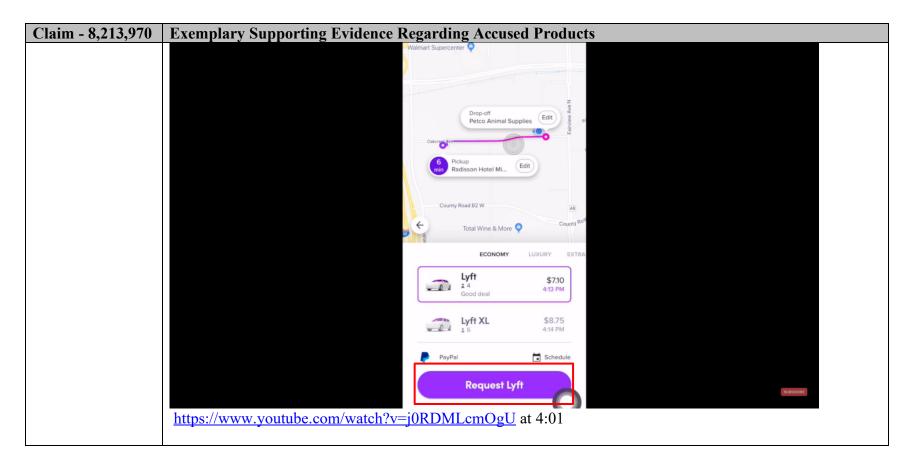


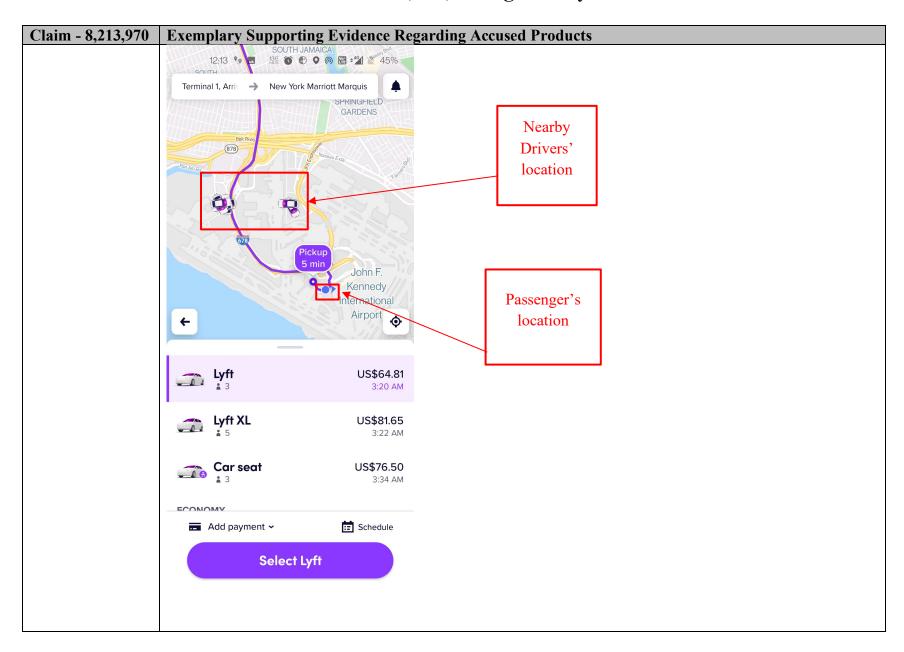


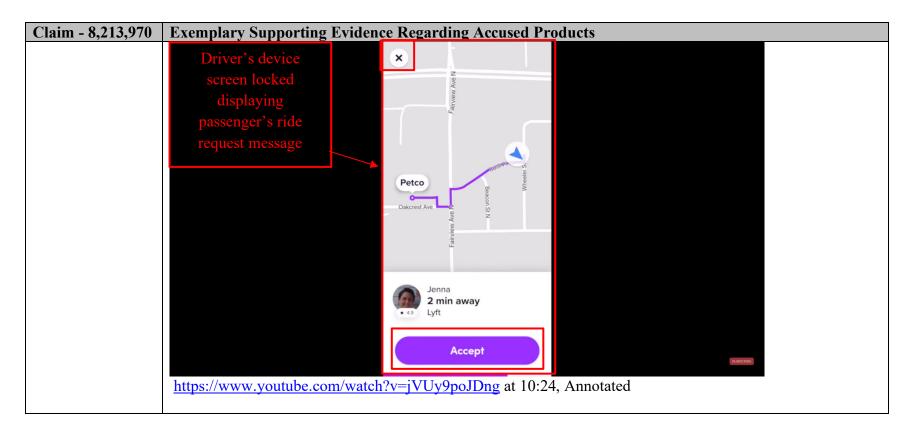


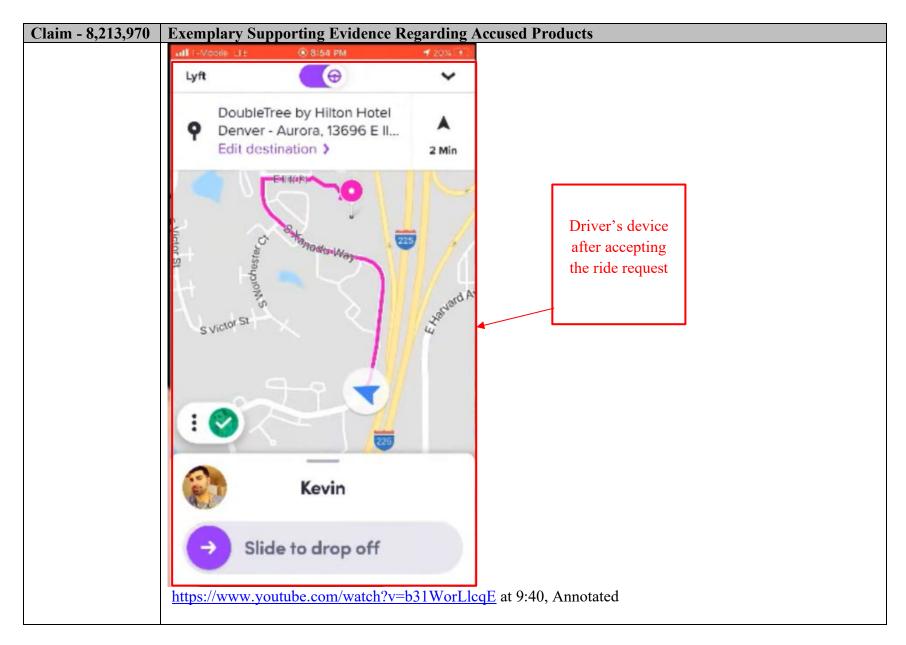


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
2[C]. means for	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
allowing a manual	and/or contributing to the performance of: means for allowing a manual response to be manually selected from
response to be	the response list or manually recorded and transmitting said manual response to the sender PDA/cell phone
manually selected	
from the response	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
list or manually	
recorded and	For example, the response list, including but not limited to accept and decline (cross button) in the forced
transmitting said	message alert is displayed on the driver's device which is manually selected by the driver. The response from
manual response	the driver who accepts the ride request is transmitted to the passenger along with the driver's information
to the sender	including but not limited to vehicle model, driver name, location and vehicle number.
PDA/cell phone;	
and	





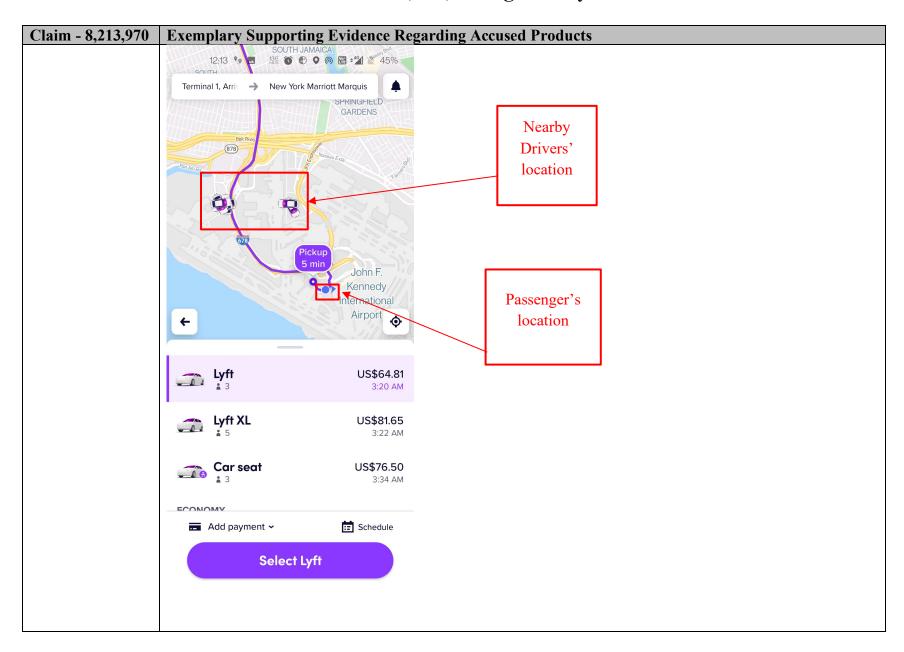


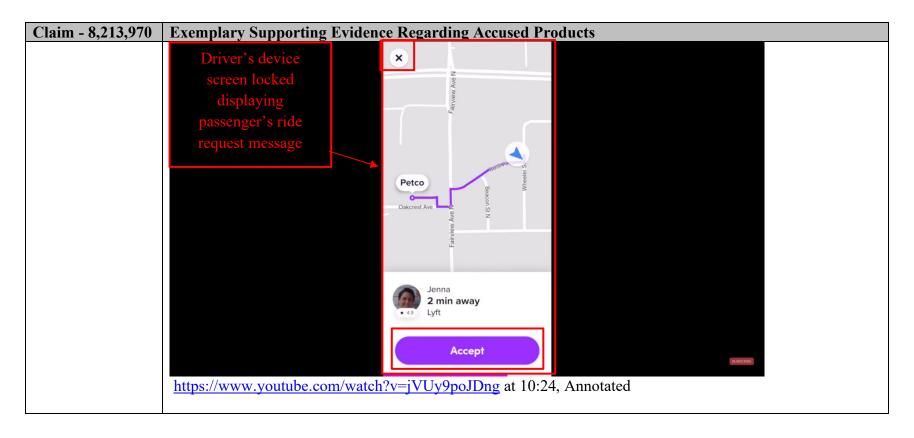


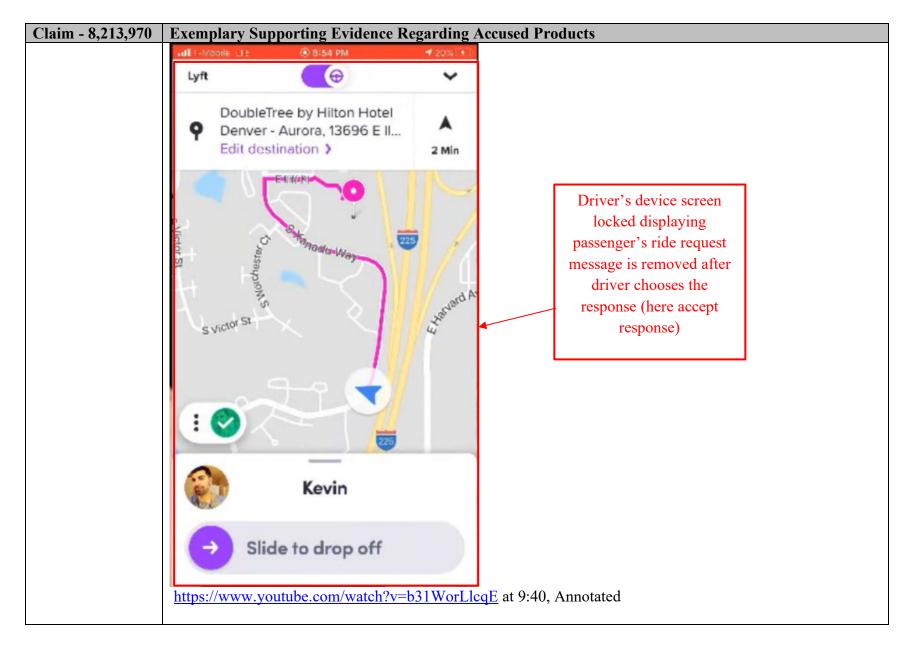
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Walmart Supercenter •
	28
	Pickup Radisson Hotel Minnea Edit Drop-off Petco Animal Suppl
	County Road B2 W County Road B2 W
	Total Wine & More O
	Joe Kia Optima 123-XYZ
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:07
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
2[D]. means for clearing the text message and a	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: means for clearing the text message and a response list from the display of the recipient PDA/cell phone or stopping the repeating voice message and clearing the response list
response list from the display of the	from the display of the recipient PDA/cell phone once the manual response is transmitted.
recipient PDA/cell phone or stopping	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 461 of 1092

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
the repeating voice	For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger
message and	which triggers a forced message alert that locks the driver's device ("controlling of the recipient PDA/cell
clearing the	phone") for a period of time until the driver ("recipient") sends a response message (decline (cross button) or
response list from	accept) to clear the locked display.
the display of the	
recipient PDA/cell	
phone once the	
manual response is	
transmitted.	

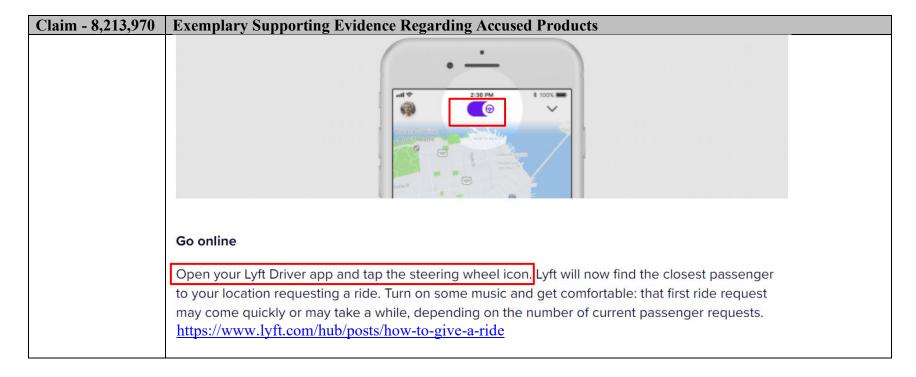


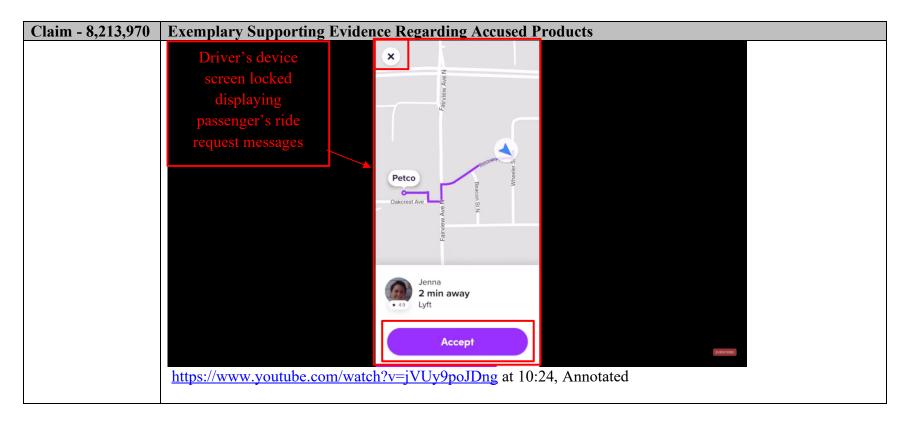


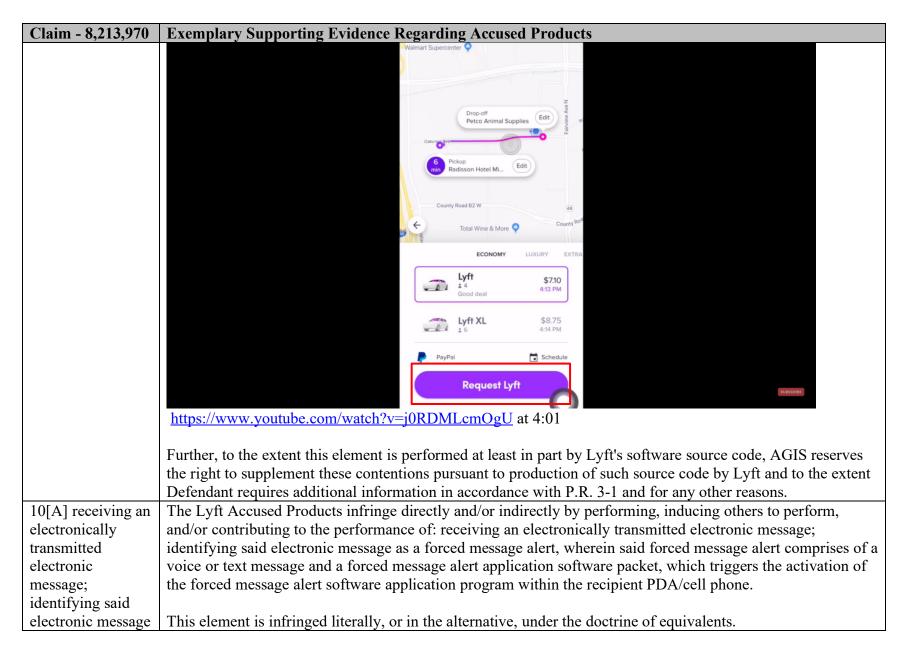


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
10[P]. A method	The Lyft Accused Products performs a computer implemented method as set forth below. Lyft further infringe
of receiving,	directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of:
acknowledging	a method of receiving, acknowledging and responding to a forced message alert from a sender PDA/cell phone
and responding to	to a recipient PDA/cell phone, wherein the receipt, acknowledgment, and response to said forced message alert
a forced message	is forced by a forced message alert software application program.
alert from a sender	
PDA/cell phone to	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
a recipient	
PDA/cell phone,	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders
wherein the	and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request,
receipt,	view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s)
acknowledgment,	and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services
and response to	host information related to and instructions for processing user/device/vehicle accounts, location data, and map
said forced	data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by
message alert is	Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and
forced by a forced	personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's
message alert	personnel.
software	A passenger ("sender") requests a ride which is transmitted to the nearby drivers. The Lyft Driver application
application	receives an electronically transmitted request for a ride which triggers a forced message alert that locks the
program, said	device for a period of time until the driver ("recipient") sends a response message (decline or accept) to clear
method	the locked display ("receiving, acknowledging and responding to a forced message alert").
comprising the	
steps of:	

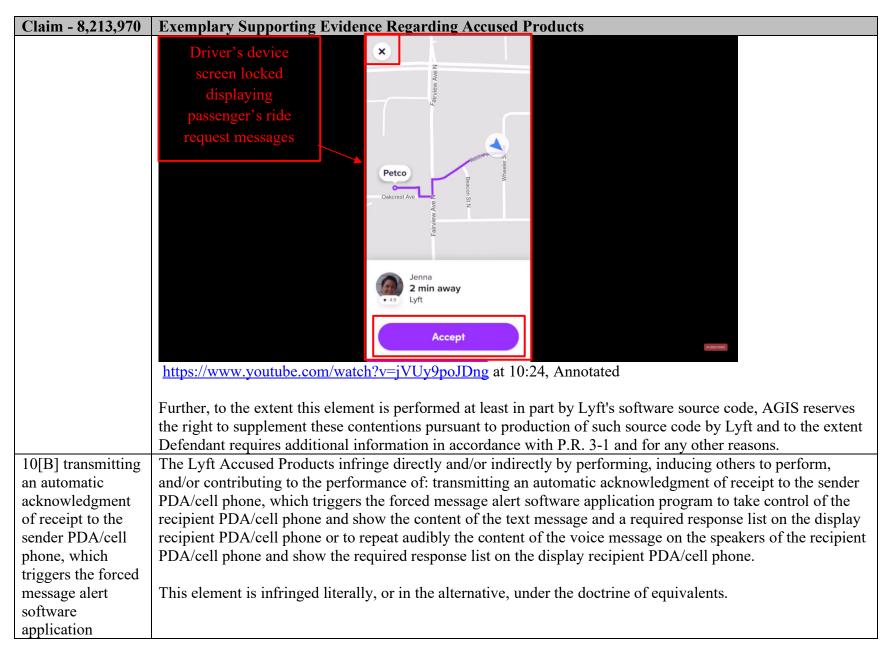
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft



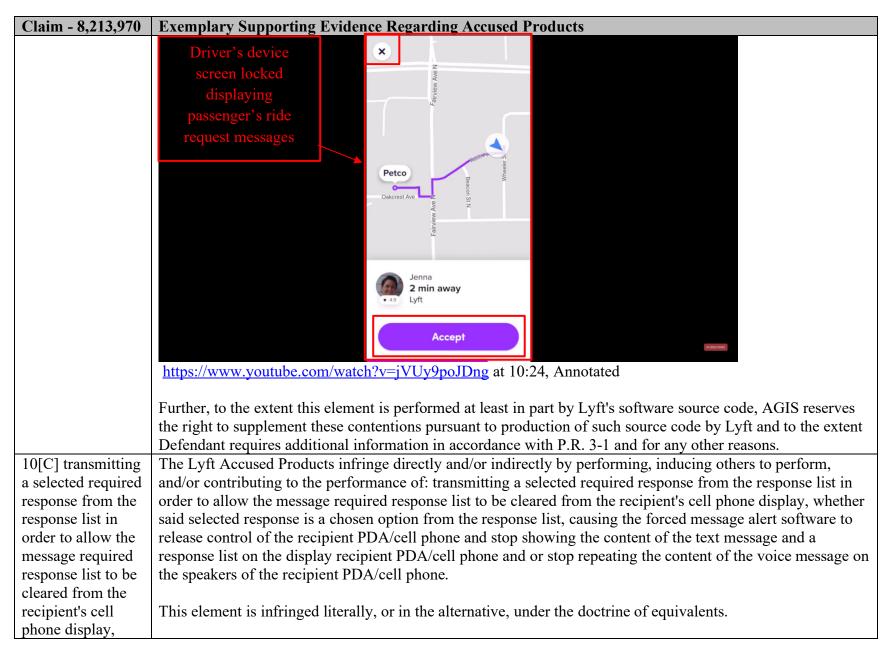




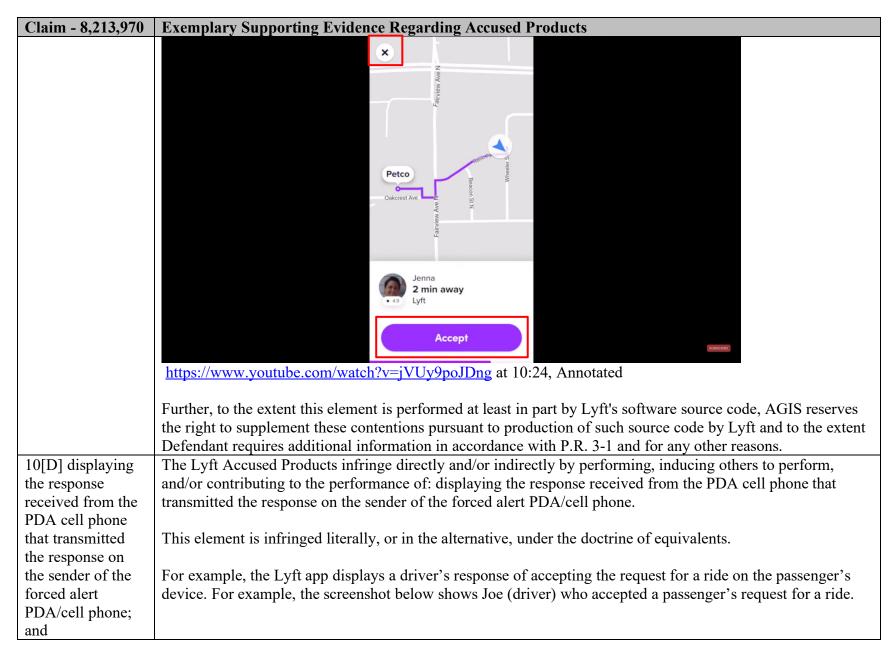
Exemplary Supporting Evidence Regarding Accused Products Claim - 8,213,970 as a forced For example, the Lyft Driver application receives an electronically transmitted request for a ride from a message alert, wherein said passenger which triggers a forced message alert that locks the driver's device for a period of time until the forced message driver ("recipient") sends a response message (decline or accept) to clear the locked display. alert comprises of a voice or text Walmart Supercenter 🤤 message and a forced message alert application Petco Animal Supplies software packet, which triggers the activation of the forced message alert software application Total Wine & More program within the recipient PDA/cell phone; Lyft 4 \$7.10 4:13 PM Lyft XL \$8.75 4:14 PM Schedule **Request Lyft** https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01



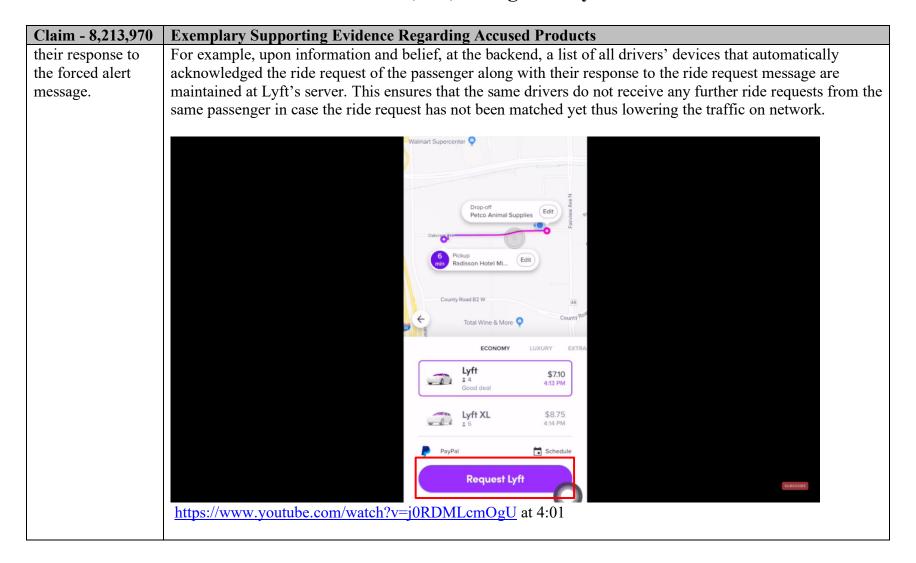
Claim - 8,213,970 **Exemplary Supporting Evidence Regarding Accused Products** For example, at the backend, each nearby driver's Lyft app that received a ride request sends an program to take acknowledgement of receipt to Lyft's servers and upon information and belief, further to the passenger's Lyft control of the recipient PDA/cell app. phone and show the content of the For example, the ride request takes control of the Lyft driver's device, displays a message with at least a pickup location and list of responses including but not limited to accept or decline (cross button). Further, the text message and a required response Lyft driver app plays an alert until a response is selected. list on the display Walmart Supercenter recipient PDA/cell phone or to repeat audibly the content of the voice Petco Animal Supplies message on the speakers of the recipient PDA/cell phone and show the required County Road B2 W response list on Total Wine & More the display recipient PDA/cell phone; and Lyft 4 \$7.10 -01 4:13 PM Lyft XL \$8.75 4:14 PM Schedule **Request Lyft** https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01

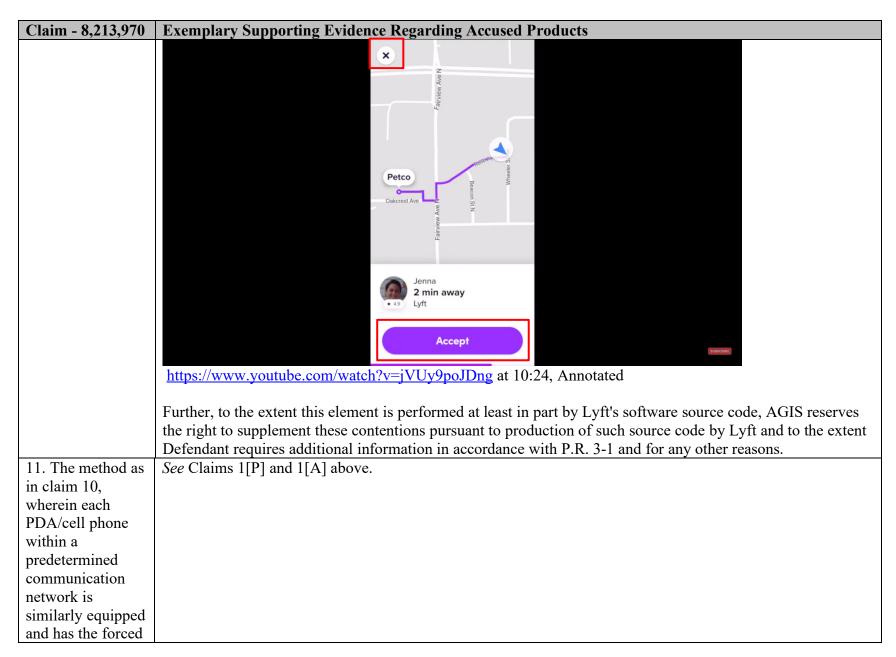


Claim - 8,213,970 **Exemplary Supporting Evidence Regarding Accused Products** whether said For example, the Lyft driver app requires selecting to accept or dismiss a ride request to release control of the driver's device (clear the locked display showing ride request message). Selecting a response also stops the selected response is a chosen option alertsin driver's device. from the response list, causing the forced message alert software to release control of Petco Animal Supplies the recipient PDA/cell phone and stop showing the content of the text message and a County Road B2 W response list on Total Wine & More the display recipient PDA/cell phone and or stop Lyft ⁴ \$7.10 repeating the content of the Lyft XL \$8.75 voice message on 4:14 PM the speakers of the Schedule recipient PDA/cell phone; Request Lyft https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01



Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
0,210,570	LYFT now Lyft Your ride is arriving in 2 min. Be ready outside and look for Joe in the black Kia Optima
	23
	Radisson Hotel Minnea Edit Calcus Cape Drop-off Petco Animal Suppl
	REI 💠
	County Road B2 W County Road B2 ly Total Wine & More
	ARRIVES IN 2 MIN
	Kia Optima 123-XYZ
	https://www.youtube.com/watch?v=j0RDMLcmOgU, at 5:05
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
10[E] providing a list of the recipient PDA/cell phones	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: providing a list of the recipient PDA/cell phones have automatically acknowledged receipt of a forced alert message and their response to the forced alert message.
have automatically acknowledged receipt of a forced	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
alert message and	





Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
message alert	
software	
application	
program loaded on	
it.	
12. The method as	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
in claim 10,	and/or contributing to the performance of: the method as in claim 10, wherein said forced message alert
wherein said	application software packet contains a response list, wherein said response list is a default list embedded in the
forced message	forced message alert software application program.
alert application	This slave set is infined at literally and in the alternative and antice destricts of assistations.
software packet contains a	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
response list,	For example, a ride request message transmitted to the driver's Lyft Driver app comprises an accept or decline
wherein said	option to respond to the passenger's request (default list embedded in the forced message alert software
response list is a	application program).
default list	application program).
embedded in the	×
forced message	
alert software	dew Aw
application	Fair Control of the C
program.	
	Petco
	Oakcrest Ave
	N-15
	Fairvie
	Jenna
	2 min away Lyft
	Accept

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 480 of 1092

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves
	the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent
12 Th 41 . 1	Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
13. The method as	See claim 5 above.
in claim 10,	
wherein said	
forced message	
alert application	
software packet	
contains a	
response list,	
wherein said	
response list is a	
custom response	
list that is created	
at the time the	
specific forced	
message alert is	
created on the	
sender PDA/cell	
phone.	

Based on information presently available, AGIS Software Development LLC ("AGIS") contends that Defendant Lyft Inc. (collectively "Lyft" or "Defendant") infringes claim 7 (the "Asserted Claim") of U.S. Patent No. 7,031,728 (the "'728 Patent") through the Accused Products, Services which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise all versions of the Lyft Application made, used, sold, offered for sale, or otherwise provided, after September 21, 2004. For example, the Accused Products comprise the Lyft application installed on all Android, iOS, Blackberry, and Windows Mobile based mobile devices (*e.g.* smartphones, tablets, laptops, and smart watches), and any variants thereof. AGIS reserves the right to amend this list of Accused Products as discovery progresses.

Lyft directly infringes each of the Asserted Claims by using, importing, testing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. On information and belief, Lyft knows that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

On information and belief, the charted version of the Lyft application is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android, iOS, Blackberry, and Windows Mobile operating systems.

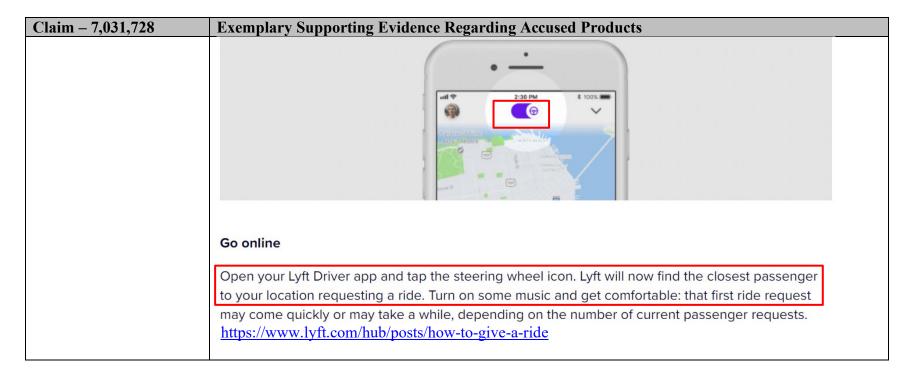
AGIS does not concede that any claims of the '728 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its Accused Products. Accordingly, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS. Furthermore, AGIS reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including, but not limited to, positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

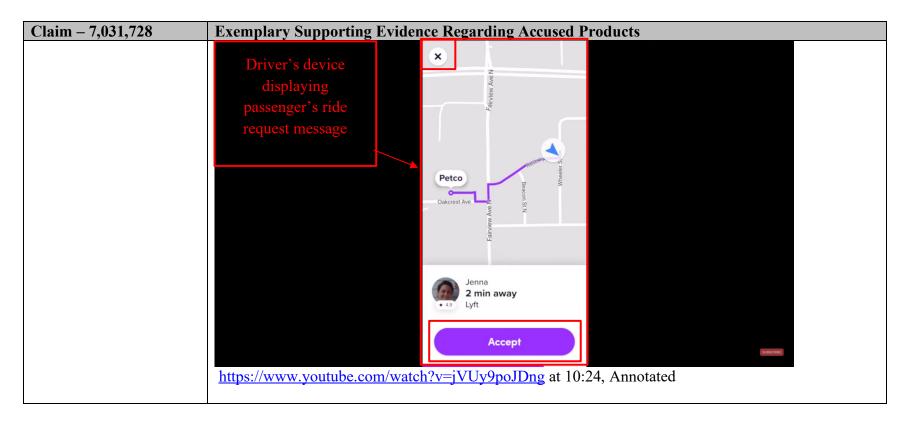
The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

¹ The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. No. 205 (Lead Case) (E.D. Tex. Oct. 10, 2018) and *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. No. 147 (Lead Case) (E.D. Tex. Dec. 20, 2020). AGIS reserves the right to update its constructions and contentions in view of this Court's claim construction order.

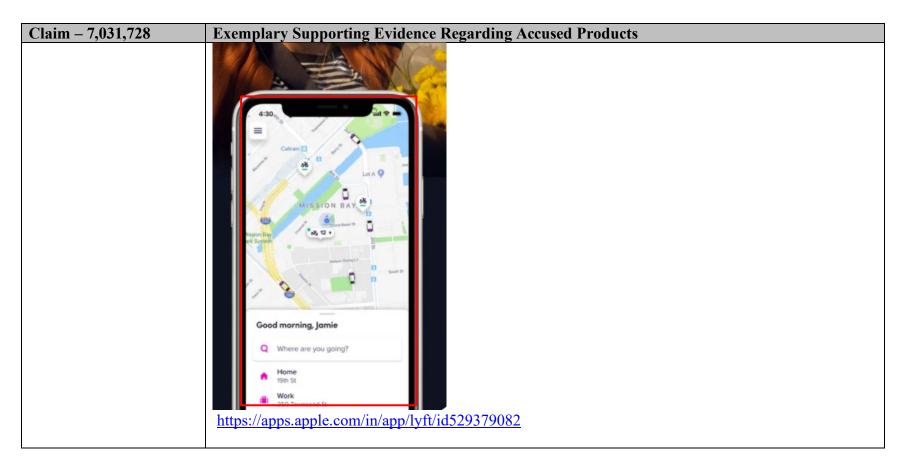
Claim – 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
7[P]. A method of	The Lyft Accused Products practice the method of establishing a cellular phone communication
establishing a cellular	network for designated participants, each having a similarly equipped cellular phone that includes voice
phone communication	communication, free and operator selected text messages, photograph and video, a CPU, a GPS
network for designated	navigation system and a touch screen display.
participants, each having	
a similarly equipped	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
cellular phone that	
includes voice communication, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system and a touch screen display comprising the steps of:	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. For example, when the passenger requests a ride from the Lyft app installed on their mobile phone, the ride request message is broadcasted to the nearby drivers who are online on the Lyft driver app. The message comprises the passenger's name and profile photo. For example, when the driver accepts the ride request of the passenger, the passenger's mobile phone receives the driver's information such as name, location, and driver's photo. After the passenger and the driver match, both of them get the option to text each other.

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft



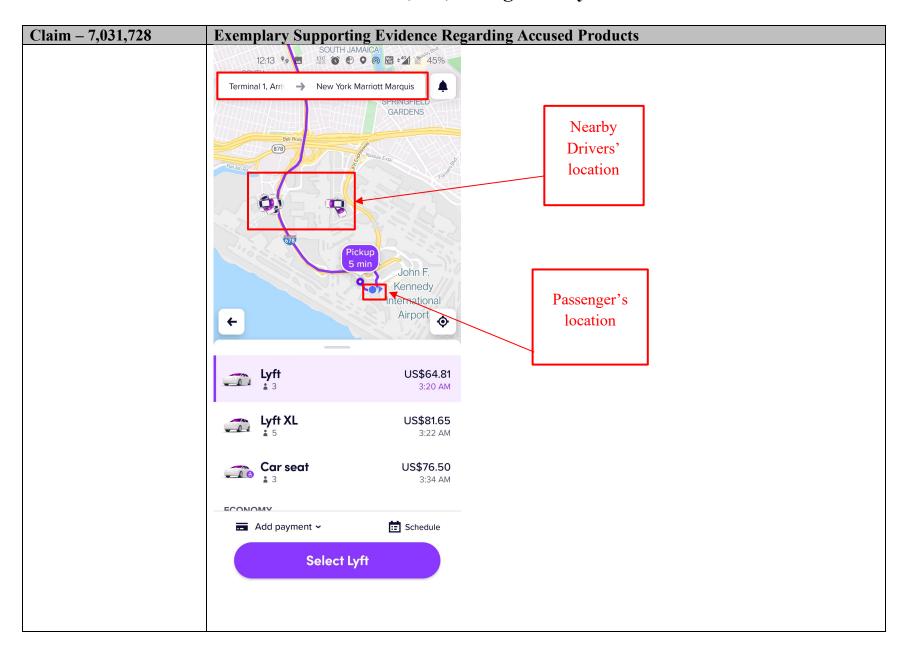


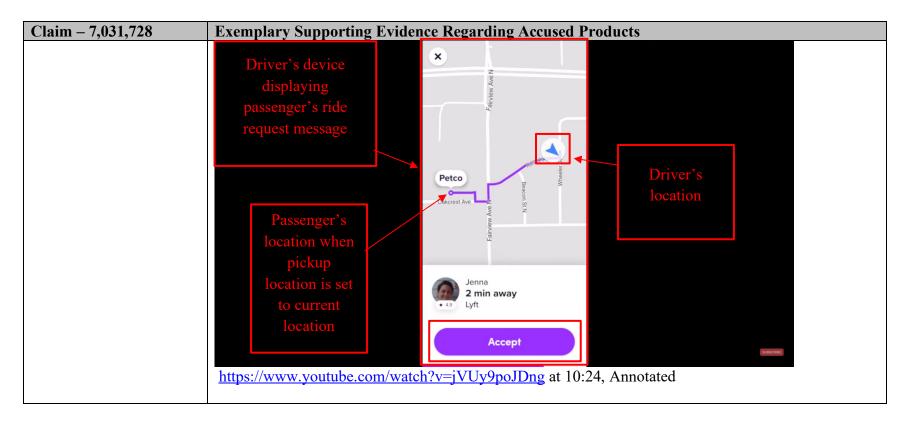


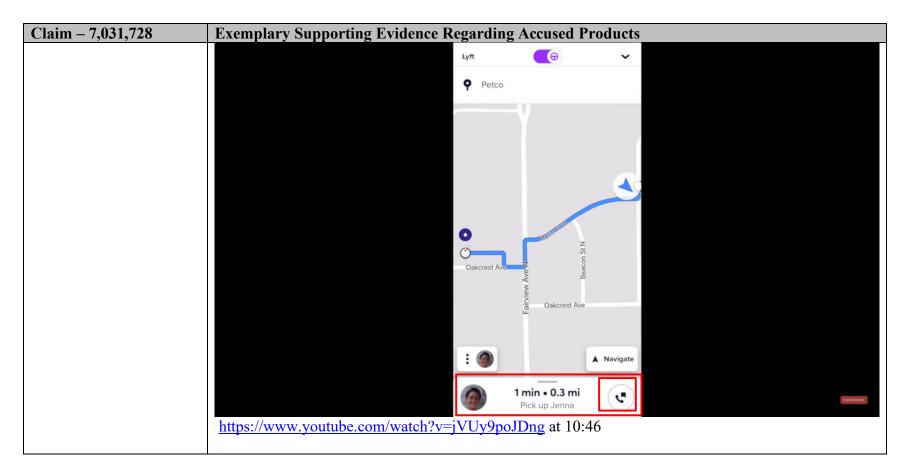


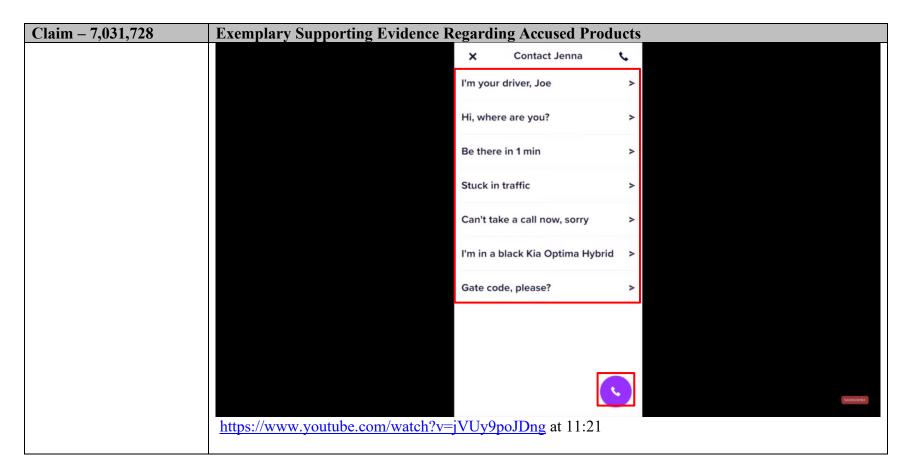
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Combining multiple components into a single chip saves on space, cost, and power consumption.
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating
	system to detecting when you press the power off button. SoCs connect to other components too,
	such as cameras, a display, RAM, flash storage, and much more.
	The list below contains the most common components that you will find inside a smartphone System-on-a-Chip. We're going to cover a few of the most important ones later on in this article.
	· Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the Android OS and most of your apps.
	• Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an app's user interface and 2D/3D gaming.
	 Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files.
	 Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a CPU. Includes decompressing music files and analyzing gyroscope sensor data.
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine
	learning (AI) tasks. These include voice recognition and camera processing.
	· Video encoder/decoder — Handles the power-efficient conversion of video files and
	formats.
	· Modems — Converts wireless signals into data your phone understands. Components
	include 4G LTE, 5G, WiFi, and Bluetooth modems.
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/

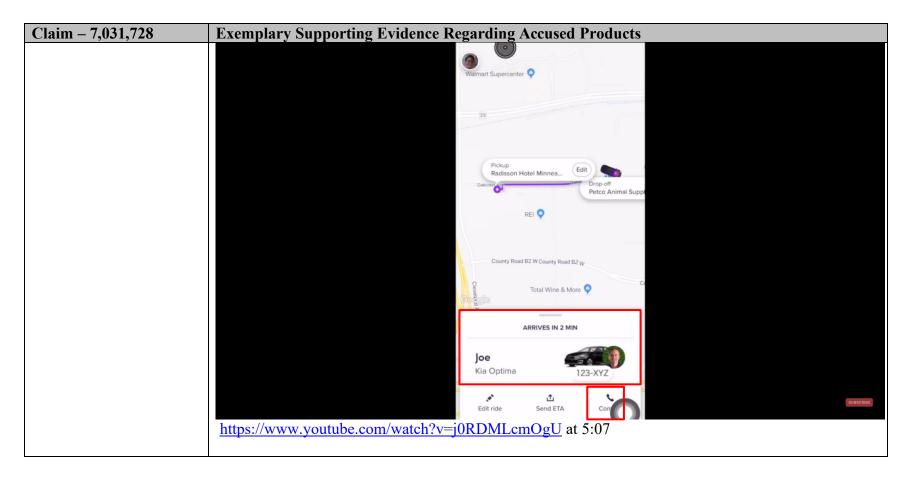
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	You must have seen that every Android and iOS device in today's age comes with
	GPS right inside it. This is one feature that will be there in every smartphone no
	matter what the price of that device might be. And that is because of the fact that
	GPS is the most basic yet most useful feature on every smartphone.
	Just for information, the GPS stands for Global Positioning System and it provides
	accurate geolocation and time information for every equipment that is equipped
	with a GPS receiver. Now, the best example of using GPS is with services such as
	Google Maps, Apple Maps, and others where you can see where exactly you are right
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS
	satellite.
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device





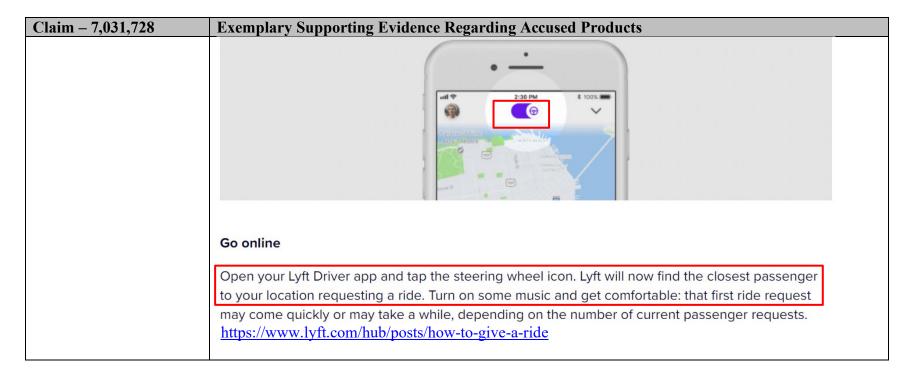


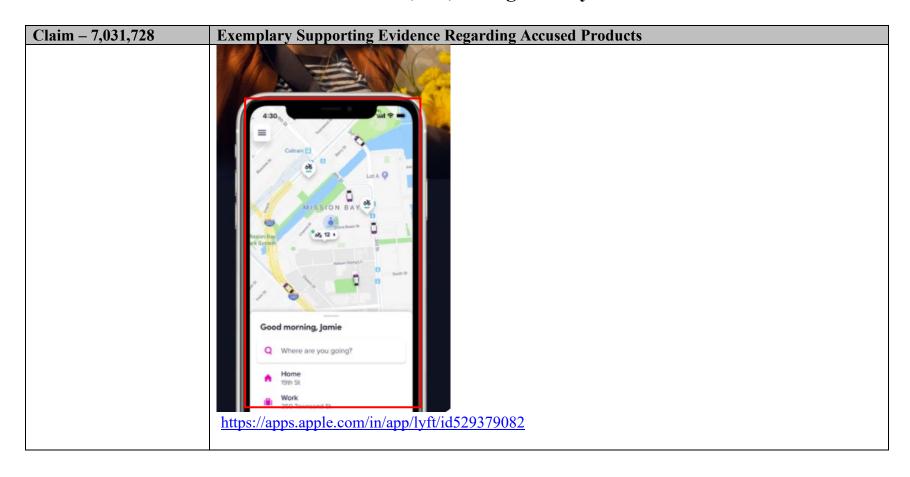


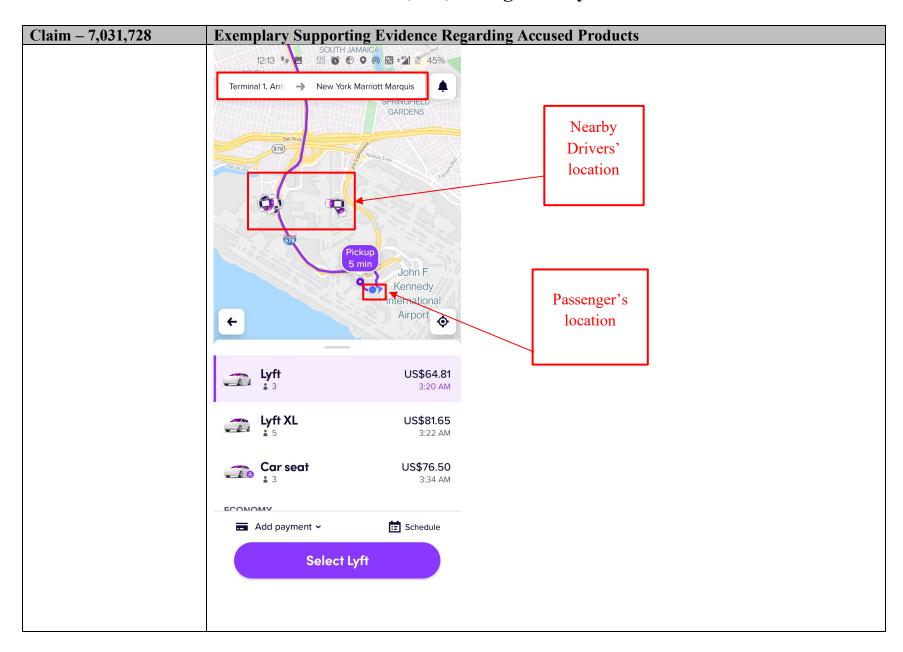


Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Contact Joe
	Be aware that they are driving and may not answer immediately
	Call Text message
	Cancel
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:32
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[A] a) generating one or	See Claim 7P above. The Lyft Accused Products practice generating one or more symbols on the touch
more symbols on the touch display screen, each representing a different participant that has a	display screen, each representing a different participant that has a cellular phone that includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display.
cellular phone that	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display;	For example, drivers' and passengers' mobile phones with the Lyft Driver and the Lyft app installed generates symbols including but not limited to blue dot denoting passenger's location, blue navigate icon denoting driver's location, and vehicle icons denoting nearby driver's location on the display of the mobile phones. Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft



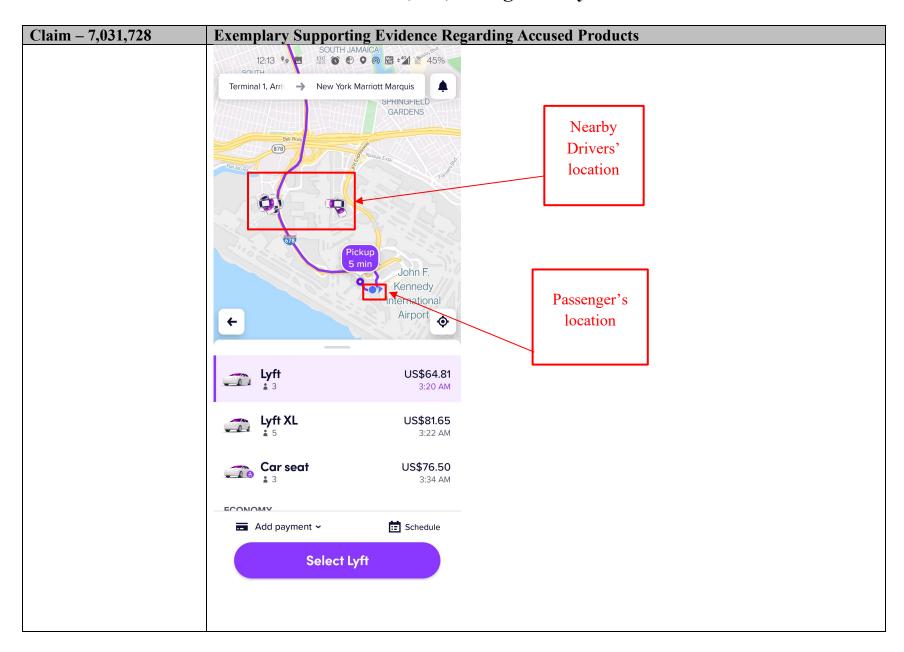




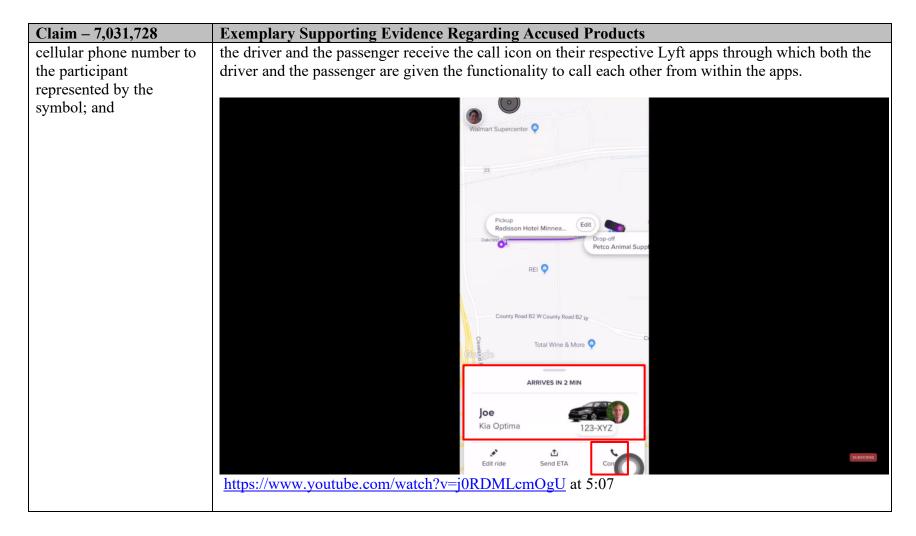
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Driver's device displaying passenger's ride request message
	Passenger's location when pickup location is set to current Passenger's Location Jenna 2 min away Lyft
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS
	reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[B]. b) providing and storing in each of the participant cellular phones one or more	The Lyft Accused Products practice providing and storing in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which relates to a different symbol of each of the participants in the communication network.
cellular phone telephone numbers, each cellular	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
phone number of which relates to a different symbol of each of the	For example, Lyft collects the phone number of each driver and passenger when they join the Lyft network. Lyft stores and provides the phones numbers in the Lyft apps and/or the Lyft server(s).

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
participants in the	Respective phone numbers for each driver/rider is associated with the corresponding rider/driver and
communication network;	their symbols.
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the
	requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Before you begin, be sure you have the following:
	Your phone numberYour email addressA photo of yourself
	Get started
	1. Type in your device's phone number
	To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account



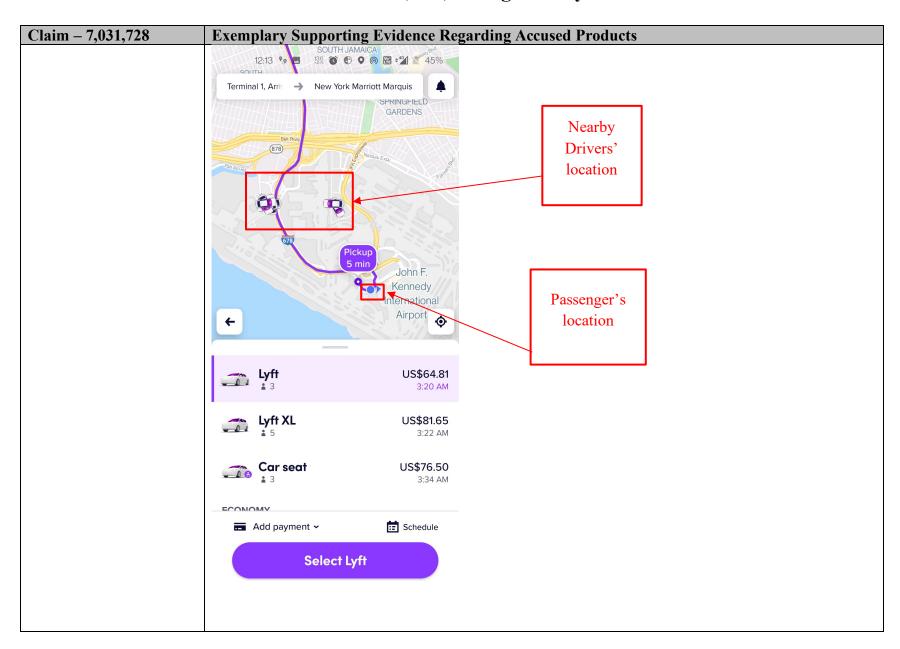
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Driver's device displaying passenger's ride request message
	Petco Passenger's location when pickup location is set to current Passenger's location when pickup Lyft Driver's location
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS
	reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[C]. c) providing initiating cellular phone calling software in each cellular phone that is	The Lyft Accused Products practice providing initiating cellular phone calling software in each cellular phone that is activated by touching a symbol on the touch display that automatically initiates a cellular phone call using the stored cellular phone number to the participant represented by the symbol.
activated by touching a symbol on the touch	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
display that automatically initiates a cellular phone call using the stored	For example, the Lyft app provides selectable interface elements within the Lyft app to call the rider/driver represented by a symbol. For example, when the driver is matched to the passenger, both

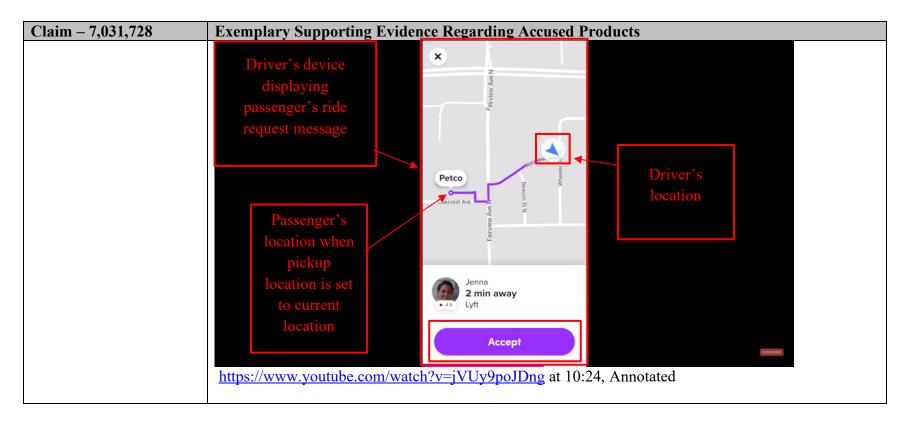


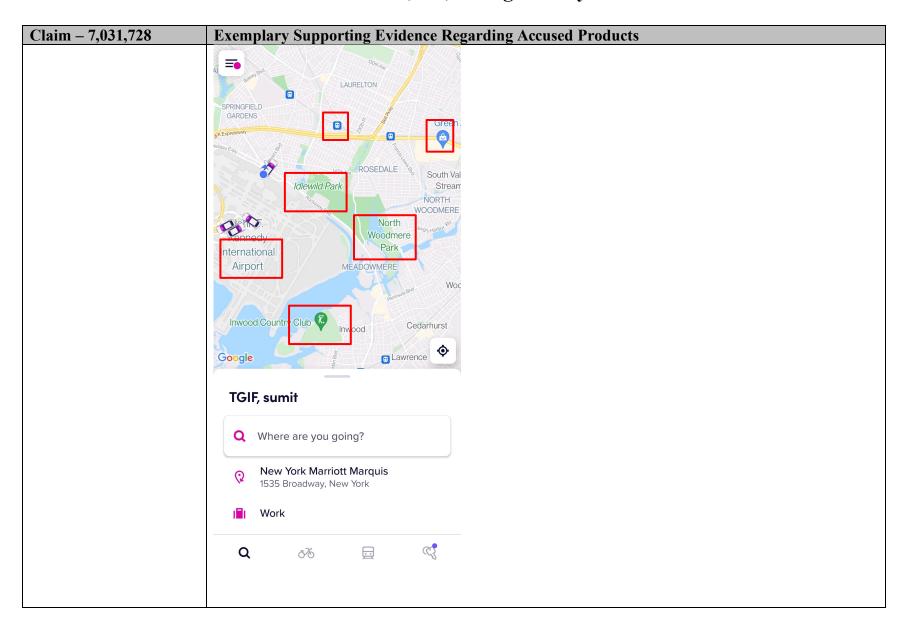
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Lyft 💮 🕶
	♀ Petco
	Oakcrest Ave
	. Navigate
	1 min • 0.3 mi Pick up Jenna
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:46
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[D]. d) generating a	The Lyft Accused Products practice generating a geographical location chart on said display screen to
geographical location chart on said display screen to show the	show the geographical location of each of the symbols representing the participants in the communication network by latitude and longitude.
geographical location of each of the symbols	This element is infringed literally, or in the alternative, under the doctrine of equivalents.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 508 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
representing the participants in the	Lyft meets this limitation because it generates a display with a geographical map presenting symbols representing drivers/riders in the Lyft platform/network. On information and belief, the symbols are
communication network	presented in the geographical map based on their respective latitude and longitude. For example,
by latitude and longitude.	drivers' and passengers' mobile phones with the Lyft Driver and the Lyft app installed generates
	symbols for riders/drivers. The maps in Lyft and Lyft Driver app also highlight the facility symbols such as a park, airport, and shops. The map in the Lyft app shows the location of the pickup address
	and the destination address when the passenger requests the ride.







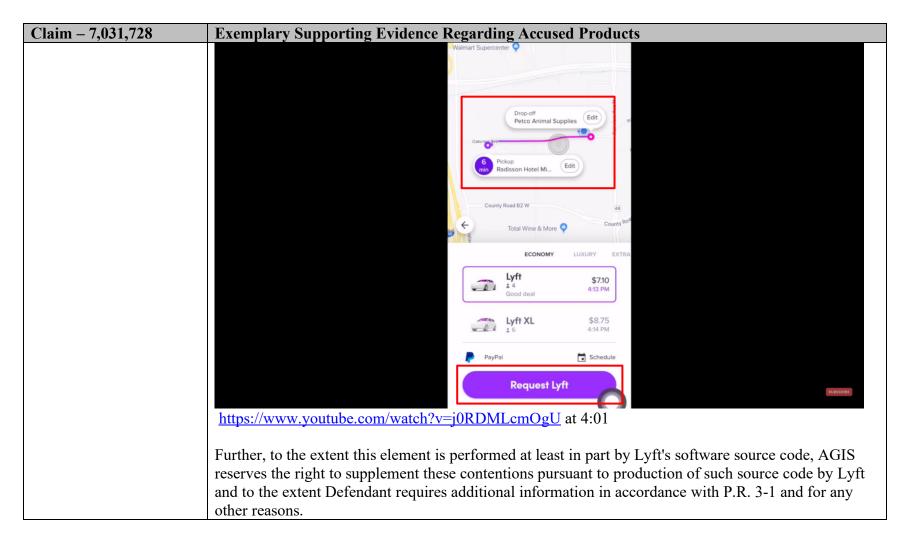


Exhibit G

1	Alfred R. Fabricant	
2	afabricant@fabricantllp.com Peter Lambrianakos	
3	plambrianakos@fabricantllp.com Vincent J. Rubino, III	
4	vrubino@fabricantllp.com	
5	FABRICANT LLP 411 Theodore Fremd Avenue, Suite 206 South	
6	Rye, New York 10580 Telephone: (212) 257-5797	
7	Facsimile: (212) 257-5796	
8	Benjamin T. Wang	
9	bwang@raklaw.com RUSS AUGUST & KABAT	
10	12424 Wilshire Boulevard, 12th Floor Los Angeles, California 90025	
11	Telephone: (310) 826-7474	
12	Facsimile: (310) 826-9226	
13	Attorneys for Defendant	
14	AGIS Software Development LLC	
15	UNITED STATES I	DISTRICT COURT
16	NORTHERN DISTRIC	CT OF CALIFORNIA
17		
18	LYFT, INC.,	Case No. 5:21-cv-04653-BLF
19	Plaintiffs,	DEFENDANT AGIS SOFTWARE
20	T taintigs,	DEVELOPMENT LLC'S DISCLOSURE
21	V.	OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS
22	AGIS SOFTWARE DEVELOPMENT LLC,	Hon. Judge Beth Labson Freeman
23	Defendant.	Hon. suage beth Labson Freeman
24		
25		
26		
27		
28		1

DEFENDANT AGIS SOFTWARE'S DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS 5:21-cv-04653-BLF

11

13

12

15

14

1617

18

1920

2122

2324

25

2627

28

following infringement disclosure under the Patent Local Rules with respect to United States Patent Nos. 7,031,728; 7,630,724; 8,213,970; 10,299,100; and 10,341,838 (collectively, the "Patents-in-Suit"). AGIS Software's investigation is ongoing, and discovery has not yet commenced. Accordingly, these disclosures are based on information available to AGIS Software at this time. AGIS Software reserves the right to supplement this disclosure after further discovery regarding the Lyft Accused Products set forth below. AGIS Software also reserves the right to assert additional claims of the Patents-in-Suit, accuse different products, or find literal and/or equivalent infringing elements in the Lyft Accused Products.

Defendant AGIS Software Development LLC ("AGIS Software") hereby makes the

I. DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS PURSUANT TO PATENT LOCAL RULE 3-1

A. ASSERTED CLAIMS

Plaintiff Lyft Inc. ("Plaintiff" or "Lyft") has infringed and continues to infringe at least the following claims of the Patents-in-Suit in connection with the Lyft Accused Products set forth below:

- Claim 7 of U.S. Patent No. 7,031,728 (the "'728 Patent");
- Claims 9, 12-16 of U.S. Patent No. 7,630,724 (the "'724 Patent");
- Claims 2, 10, 12-13 of U.S. Patent No. 8,213,970 (the "'970 Patent");
- Claims 1-31 of U.S. Patent No. 10,299,100 (the "'100 Patent"); and
- Claims 1-26 of U.S. Patent No. 10,341,838 (the "'838 Patent").

AGIS Software reserves the right to seek leave of court to add, delete, substitute, or otherwise amend this list of asserted claims should further discovery, the Court's claim construction, or other circumstances so merit.

B. ACCUSED INSTRUMENTALITIES

AGIS Software is currently aware that the following Lyft Products infringe each of the Patents-in-Suit, either alone or in concert with one or more other Lyft Accused Products:

• Lyft applications, services, and servers;

¹ There is no operative complaint in this action, and AGIS has not filed an answer.

- Lyft Driver applications, services, and servers; and
- Lyft servers related to Lyft applications and Lyft Driver applications.

AGIS Software reserves the right to amend this list of accused instrumentalities, as well as other information contained in this document and the exhibits hereto, to incorporate new information learned during the course of discovery including, but not limited to, the inclusion of newly-released products or any other equivalent devices ascertained through discovery.

C. CLAIM CHARTS

Claim charts identifying a location of every element of every asserted claim of the Patents-in-Suit within Lyft Accused Products are attached hereto as Exhibits A-E. AGIS Software believes that the citations in the claim charts are representative of all Lyft Accused Products. For example, where AGIS Software cites reference material or images representing an application, service, or server that citation is representative for all other such applications, services, or servers including all prior and future versions unless otherwise noted. AGIS Software reserves the right to amend these claim charts as well as other information contained in this document and the exhibits hereto, to incorporate new information learned during the course of discovery including, but not limited to, information that is not publicly available or readily discernible without discovery. AGIS Software further reserves the right to amend these claim charts, as well as other information contained in this document and the exhibits attached hereto, pursuant to Patent Local Rules 3-1(g) and 3-6.

D. LITERAL INFRINGEMENT AND DOCTRINE OF EQUIVALENTS

AGIS Software asserts that, under the proper construction of the asserted claims and their claim terms, the limitations of the asserted claims of the Patents-in-Suit are literally present in the Lyft Accused Products as set forth in the claim charts attached hereto as Exhibits A-E. AGIS Software contends that any and all elements found not to be literally infringed are infringed under the doctrine of equivalents because the differences between the claimed inventions and the accused instrumentalities, if any, are insubstantial.

AGIS Software contends that Lyft directly infringes the asserted claims by making, using, offering for sale, selling, and importing into the United States the accused instrumentalities as well

as indirectly infringe by contributing to and/or inducing others (e.g., Lyft customers or its Lyft customers' customers) to directly infringe those claims by making, using, offering for sale, or selling the Lyft Accused Products. AGIS Software contends that Lyft directly infringes the asserted claims by testing the Lyft Accused Products in the United States.

Pursuant to Patent Local Rule 3-6(a), AGIS Software reserves the right to amend its Infringement Contentions as to literal infringement or infringement under the doctrine of equivalents, *e.g.*, in light of the Court's claim construction.

E. PRIORITY DATES

Under Patent Local Rule 3-1(f), each of the asserted claims of the Patents-in-Suit are entitled to a priority date of at least as early as September 21, 2004.² For the purposes of this case only, AGIS Software intends to assert the following priority dates to earlier applications:

- April 17, 2006 for Claims 1-31 of U.S. Patent No. 10,299,100 (the "'100 Patent");
 and
- April 17, 2006 for Claims 1-26 of U.S. Patent No. 10,341,838 (the "838 Patent")

With the identification of these priority dates, AGIS does not waive the right to assert earlier priority dates to earlier applications. AGIS Software reserves the right to establish an earlier date of invention based upon actions related to conception and reduction to practice of the claimed inventions.

F. PRACTICING PRODUCTS

Pursuant to Patent Local Rule 3-1(g), AGIS Software contends that licensee AGIS, Inc.'s LifeRing products are covered by at least one of claim 7 of the '728 Patent; claims 9, 12-16 of the '724 Patent; claims 2, 10-13 of the '970 Patent; claims 1-31 of the '100 Patent; and claims 1-26 of the '838 Patent. AGIS is not aware of any other licensee that practice any claim of the Patents-in-Suit. AGIS Software's investigation is ongoing and AGIS Software reserves the right to supplement, amend, or amend these contentions in view of facts learned during discovery, the

² AGIS continues to rely on interim priority dates identified in each of the Patents-in-Suit to establish priority prior to the actual filing date of the Patents-in-Suit.

release of new products, or the modification of current products, and/or the Court's claim construction.

Pursuant to Patent Local Rule 3-1(h), while there is no operative complaint and AGIS has not filed an answer, the first date of infringement appears to be at or around May 2012 and AGIS reserves the right to seek past damages up to six years before the filing of any counterclaim in this action. AGIS Software's investigation is ongoing and AGIS Software reserves the right to supplement, amend, or amend these contentions in view of facts learned during discovery and after the filing of the amended complaint.

Pursuant to Patent Local Rule 3-1(i), while there is no operative complaint and AGIS has not filed an answer, Lyft's infringement of the Asserted Patents has been willful since January 29, 2021, when it received a complaint in AGIS Software Development LLC v. Lyft Inc. 2:21-cv-00024 (E.D. Tex., Jan. 29, 2021), and continues to be willful. AGIS Software's investigation is ongoing and AGIS Software reserves the right to supplement, amend, or amend these contentions in view of facts learned during discovery and after the filing of the complaint.

G. PRODUCTION OF DOCUMENTS PURSUANT TO PATENT LOCAL RULE 3-2

AGIS Software is producing or making available for inspection documents that are in AGIS Software's possession, custody, or control as set forth in Patent Local Rule 3-2. An AGIS Software 3-2 Production Index identifying these documents is attached hereto.

This preliminary identification of documents is for convenience and is not an admission that each document falls within any exemplary categories in the Patent Local Rules, or that any document qualifies as prior art. AGIS Software is continuing with its investigation, particularly with respect to ESI. Thus, AGIS Software reserves its right to add to, delete from, or otherwise modify its disclosures in this section as its investigation proceeds.

Production of these documents is governed by Patent Local Rule 2-2, and, with the exception of documents produced pursuant to P.R. 3.2(c) and public documents listed in the infringement charts, are considered "Highly Confidential –Attorneys Eyes Only" and disclosure of the

1	confidential document or information shall be limited to each party's outside attorney(s) of record
2	and the employees of such outside attorney(s).
3	
4	DATED: February 25, 2022 Respectfully submitted,
5	RUSS AUGUST & KABAT
6	By: <u>/s/ Benjamin T. Wang</u> Benjamin T. Wang
7	FABRICANT LLP
8	Alfred R. Fabricant ffabricant@fabricantllp.com
9	Peter Lambrianakos plambrianakos@fabricantllp.com
10	Vincent J. Rubino, III vrubino@fabricantllp.com
11	411 Theodore Fremd Avenue, Suite 206 South Rye, New York 10580
12	Telephone: (212) 257-5797 Facsimile: (212) 257-5796
13	Attorneys for Defendant
14	AGIS Software Development LLC
15	CERTIFICATE OF SERVICE
16	The undersigned hereby certified that a true and correct copy of the above and foregoing
17	
18	document has been served via electronic mail on February 25, 2022, to all counsel of record.
19	I declare under the penalty of perjury that the foregoing is true and correct.
20	DATED: February 25, 2022 /s/ Benjamin T. Wang Benjamin T. Wang
21	
22	
23	
24	
25	
26	
27	_
28	DEFENDANT AGIS SOFTWARE'S DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Based on information presently available,¹ Defendant AGIS Software Development LLC ("AGIS Software") contends that Plaintiff Lyft Inc. ("Lyft" or "Plaintiff") infringes claims 1-26 (the "Asserted Claims") of U.S. Patent No. 10,341,838 (the "'838 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise the Lyft and Lyft Driver applications, servers, and services manufactured, used, or sold by Lyft, Inc. during and after 2016. AGIS Software reserves the right to seek leave of court to amend this list of Accused Products after the filing of an amended complaint or as discovery progresses.

Lyft directly infringes each of the Asserted Claims by making, using, importing, testing, distributing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. Lyft knows, or should have known, that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

A-1

¹ There is no operative complaint asserting non-infringement of any patent claim in this action at this time. AGIS Software reserves the right to update its contentions upon receipt of any future amended complaint.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 521 of 1092

Attachment A for US Patent No. 10,341,838 Against Lyft Accused Products

The following chart identifies specifically where each limitation of each Asserted Claim is found within the Accused Products, and in particular, the corresponding elements that meet the limitations in the Lyft and Lyft Driver applications, services, and services. On information and belief, each charted version of the Lyft servers related to the Lyft and Lyft Driver Apps is representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android and iOS operating systems. AGIS Software relies on circumstantial evidence of the servers' features by relying on the end features or services provided by the Lyft and Lyft Driver Apps.

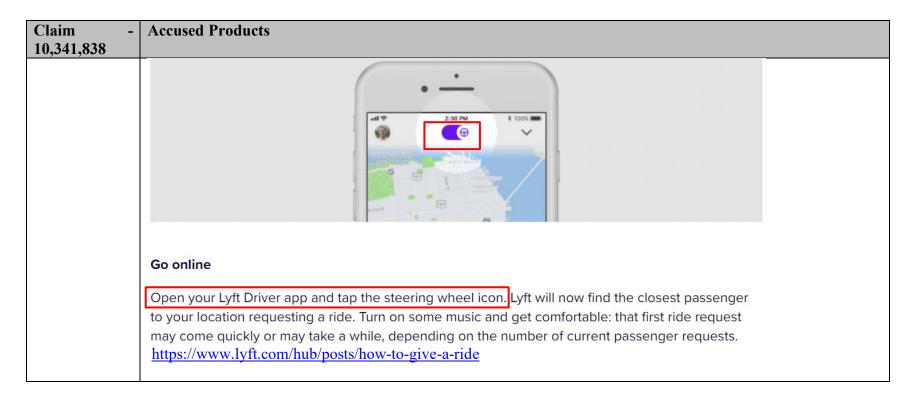
AGIS Software does not concede that any claims of the '838 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its accused products. Accordingly, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS Software. Furthermore, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s);² in view of any positions taken by Lyft, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

² The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. 205 (E.D. Tex. Oct. 10, 2018); *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. 147 (E.D. Tex. Dec. 8, 2020); *AGIS Software Dev. LLC v. T-Mobile USA, Inc., et al.*, No. 2:21-cv-00072-JRG, Dkt. 213 (E.D. Tex. Nov. 10, 2021). AGIS Software reserves the right to update its constructions and contentions in view of this Court's claim construction order.

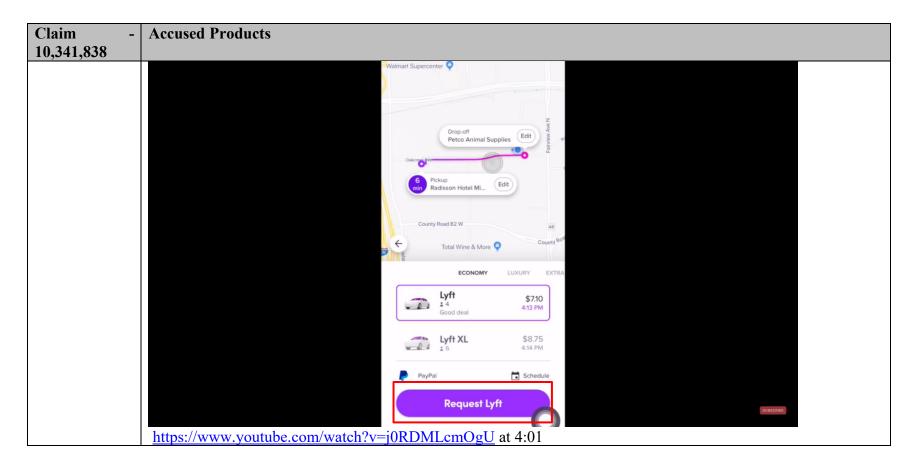
Claim - 10,341,838	Accused Products
1[P]. A method performed by one or more servers each having one or more processors, the method comprising:	The Lyft Servers perform the computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method performed by one or more servers each having one or more processors For example, Lyft provides the Lyft app for passengers and the Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. Lyft provides one or more servers with processors (either hardware or software). The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data.
	Lyft Driver app We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for
	passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 523 of 1092

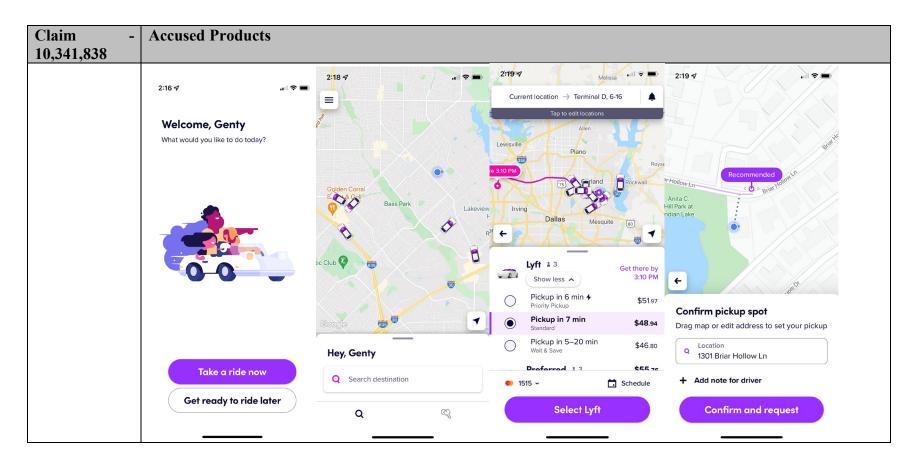




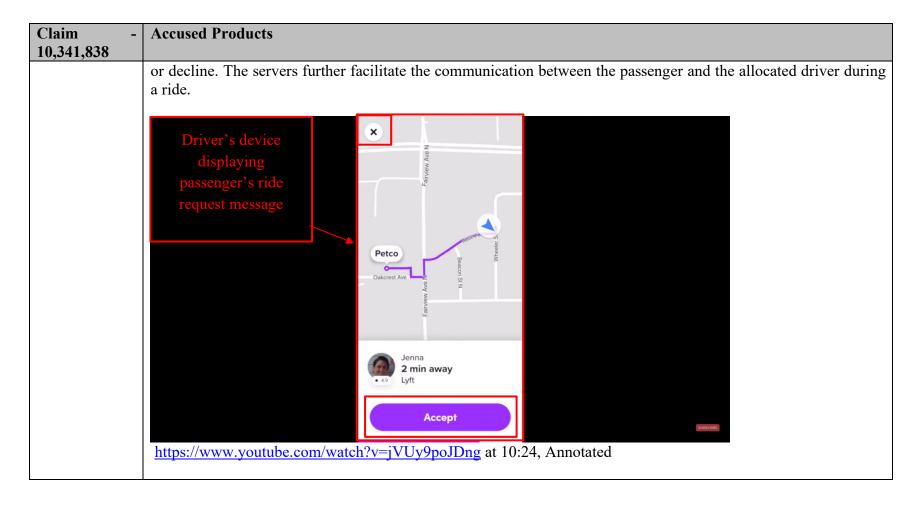
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 525 of 1092



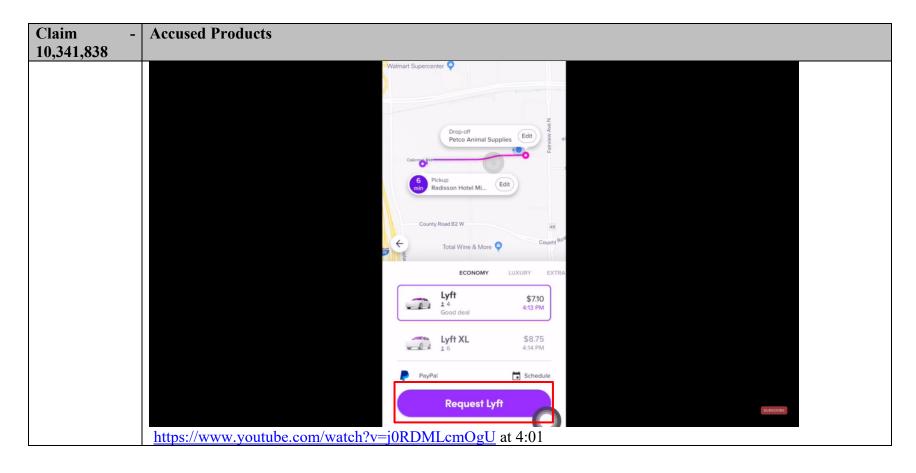
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 526 of 1092



Claim - 10,341,838	Accused Products
	2:20.4 CLUB RER 2:20.4 CLUB RER 2:21.4 +12482680433 now Your driver will be there in 5 min. Look for your driver in a 2019 Hyundai Ioniq Hybr +1(248) 268-0433
	Text Message Today 2:20 PM Your driver will be there in 5 min. Look for your driver in a 2019 Hyundai loniq Hybrid, and mask up before you get in.
	DUCK CREEK GATEWOOD ESTATES
	Smoother pickups are here When you request a ride, Lyft will use your most up-to-date location to help your driver find you faster and ensure the ride's on
	track. You can turn this off any time. Learn more → Bertrand Hyundai loniq Hybrid ★★★★ 4.9 MSM1832 Text Message
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[A]. executing operations on the one or more	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: executing operations on the one or more processors, the operations.
processors, the operations comprising:	For example, Lyft servers comprise processors which receive passenger's request for a ride and communicate the request to the nearby drivers. The nearby drivers receive the request for a ride from the passengers which they accept

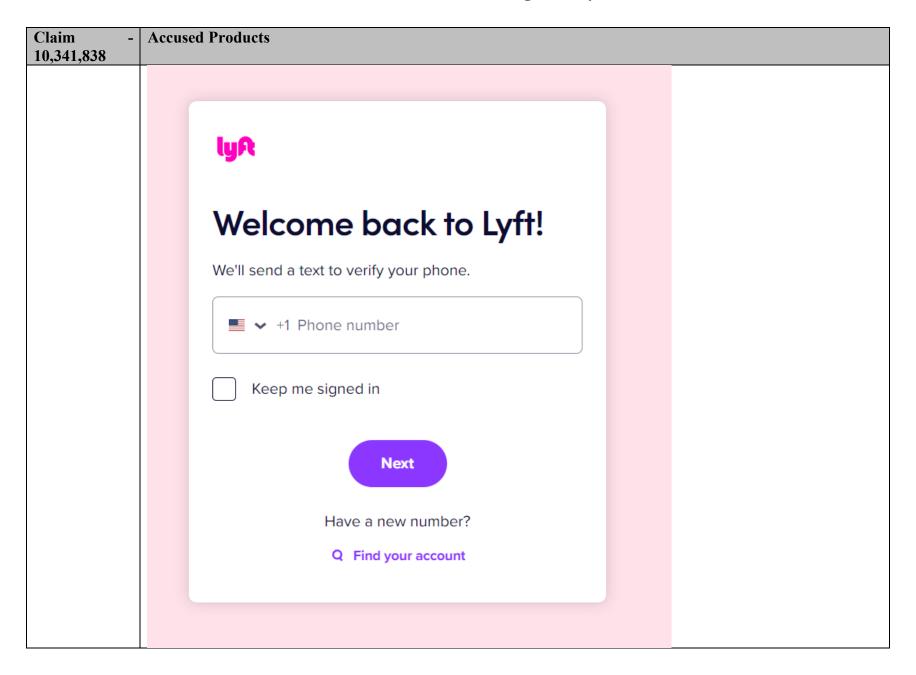


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 529 of 1092



Claim - 10,341,838	Accused Products
	2:19 7 Recommended By the low to go and the lo
	Q Location 1301 Briar Hollow Ln
	+ Add note for driver Confirm and request
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[B]. obtaining first data provided by a first mobile device corresponding	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: obtaining first data provided by a first mobile device corresponding to a vehicle, the first data including a first identifier.

Claim - 10,341,838	Accused Products							
to a vehicle, the first data including a first identifier	For example, the Lyft driver sets up his/her account by providing information including but not limited to name, email address, phone number, driver's license and vehicle information. Lyft assigns one or more indentifications associated with the account.							
	providing information for drivers the sign-in obtain the	information. The Lyst. The Lyst or log-in data by re	on including but not ft server(s) perform t server(s) also per process from the lequesting status of	alled in a driver's mobile of limited to name, email a m this limitation when they rform this limitation, after Lyft app for drivers. The Lor other data via the Lyft ty of the driver, account, v	ddress, pho obtain the account cre yft server(s) app for driv	ne number, account creation, when also perforvers. In all	driver's lintion data they obta m this lim cases, the	from the Lyft app in the data during nitation when they
	lyA	DRIVER	Earnings Cities Help		RIDER	BUSINESS	LOG IN	SIGN UP
		Wa Sta	rt tod	De your o	wn	bos	s?	
	Source: ht	tps://www	.lyft.com/driver.					

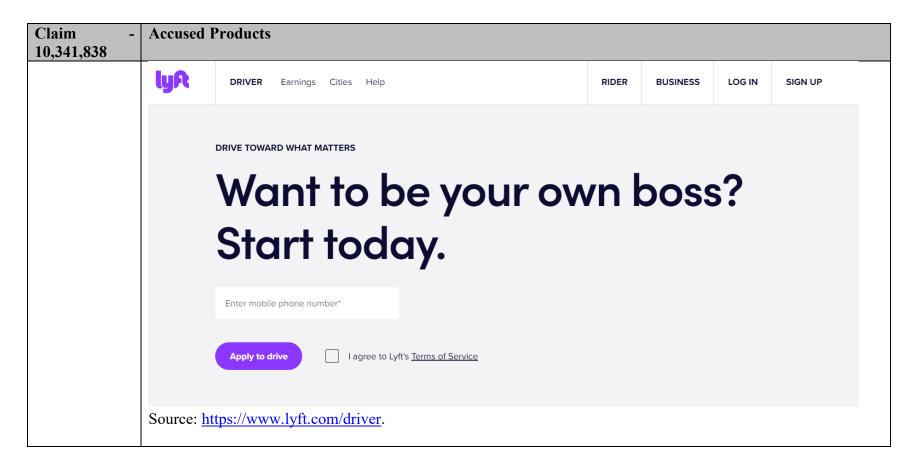


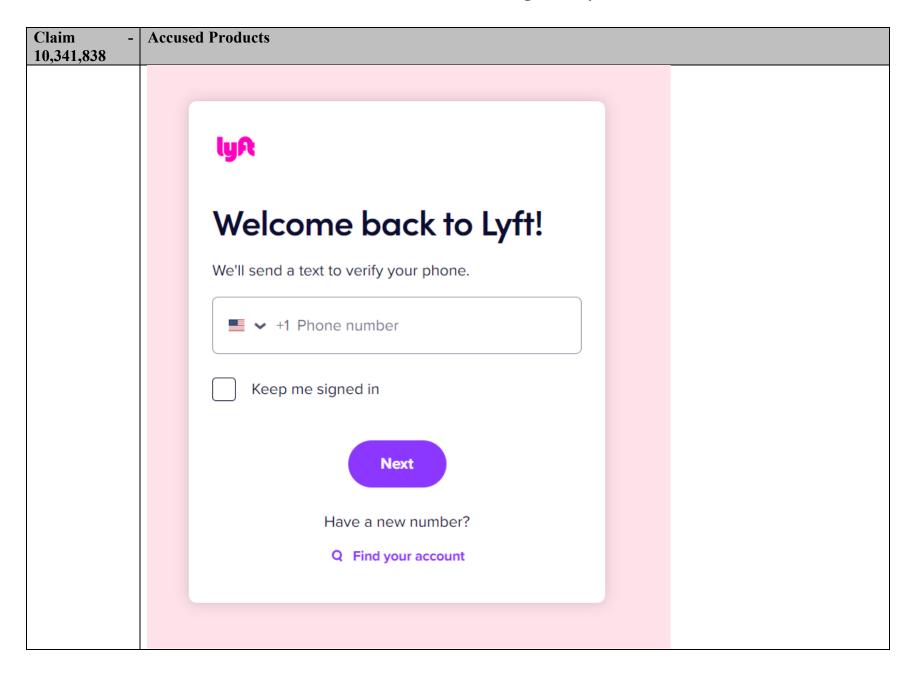
Claim - 10,341,838	Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check DMV check
	 DMV check Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,341,838	Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 535 of 1092

Claim -	Accused Products
10,341,838	
1[C]. permitting the	
first mobile device	communication network, the permitting based on a determination regarding the first data.
corresponding to the vehicle to join a communication network, the permitting based on a determination regarding the first data	to add the account/driver/vehicle to the Lyft platform or network of drivers and passengers. The Lyft server(s) also perform this limitation when the server uses the account or identity information to create or activate or update an





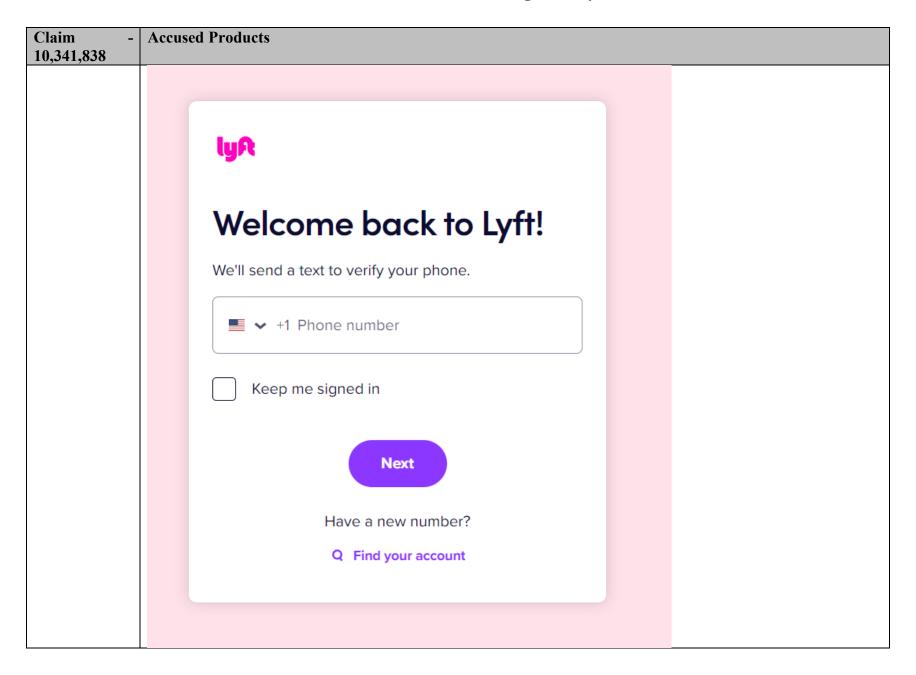
Claim - 10,341,838	Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check
	DMV check
	Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,341,838	Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 540 of 1092

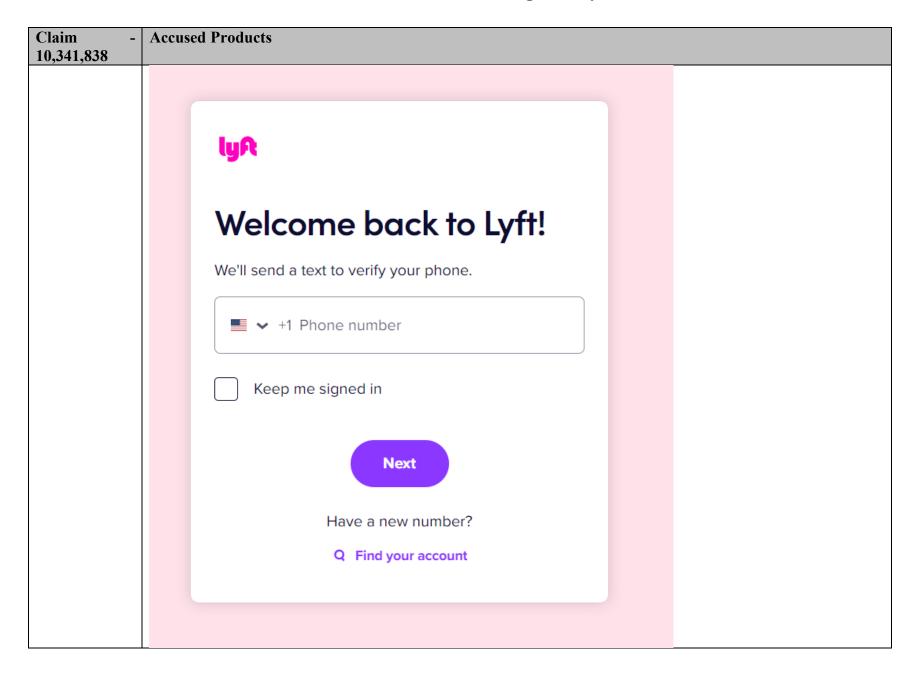
Claim -	Accused Products
10,341,838	
1[D]. obtaining	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
second data	contributing to the performance of: obtaining second data provided by a second mobile device corresponding to a
provided by a	participant, the second data including a second identifier associated with the participant.
second mobile	
device	
corresponding	For example, the Lyft app installed on a passenger's mobile device allows a passenger to set up his/her account by
to a participant,	providing information including but not limited to name, email address and phone number. The Lyft server(s)
the second data	perform this limitation when they obtain the account creation data from the Lyft app for riders. The Lyft server(s)
including a	also perform this limitation, after account creation, when they obtain the data during the sign-in or log-in process
second	from the Lyft app for riders. The Lyft server(s) also perform this limitation when they obtain the data by requesting
identifier	status or other data via the Lyft app for riders. In all cases, the second identifier is information associated with the
associated with	identity of the rider, account, device, phone number, or Lyft app for riders.
the participant	

Claim - 10,341,838	Accused Products
10,6 11,000	Sign up for a Lyft account
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	Log-in troubles? Read How to fix log-in issues for more.
	Age requirement: You must be at least 18 years old to create a Lyft account, request a ride, or have a ride requested for you.
	Back to top
	Source: https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account.



Claim - 10,341,838	Accused Products
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump. The Lyft rider app allows a user to register and join the network with their phone number. Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[E]. allowing the second mobile device corresponding to the participant to join the communication network, the allowing based on a determination regarding the second data	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: allowing the second mobile device corresponding to the participant to join the communication network, the allowing based on a determination regarding the second data. The Lyft server(s) perform this limitation when the server uses the account or identity information described above to add the account/rider/phone number/Lyft app for riders to the Lyft platform or network of drivers and passengers. The Lyft server(s) also perform this limitation when the server uses the account or identity information to create or activate or update an account using the account or identity information described above. The Lyft server(s) also perform this limitation when a rider completes the sign-in or log-in process. The Lyft server(s) also perform this step using a verification or validation process within sign-up, sign-in, or status request process. The account or identity information is associated with the Lyft platform or network of drivers and passengers or a subset of the platform or network.

Claim - 10,341,838	Accused Products
	Sign up for a Lyft account
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	Log-in troubles? Read How to fix log-in issues for more.
	Age requirement: You must be at least 18 years old to create a Lyft account, request a ride, or have a ride requested for you.
	Back to top
	Source: https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account



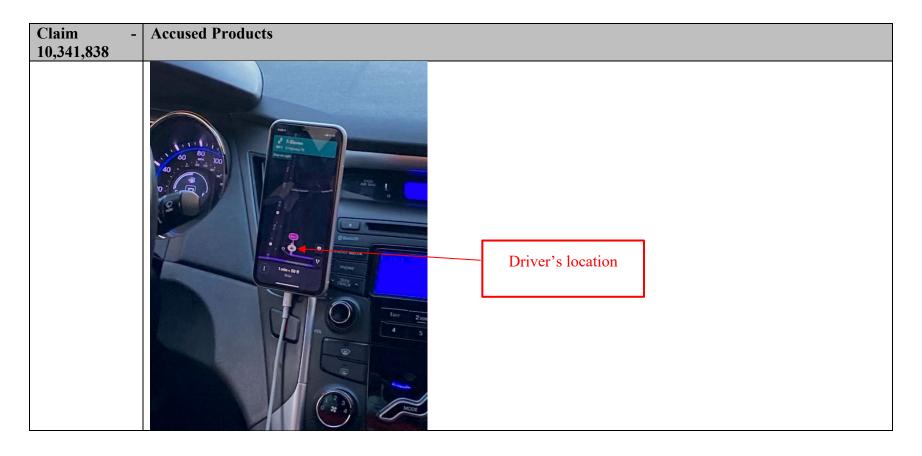
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 546 of 1092

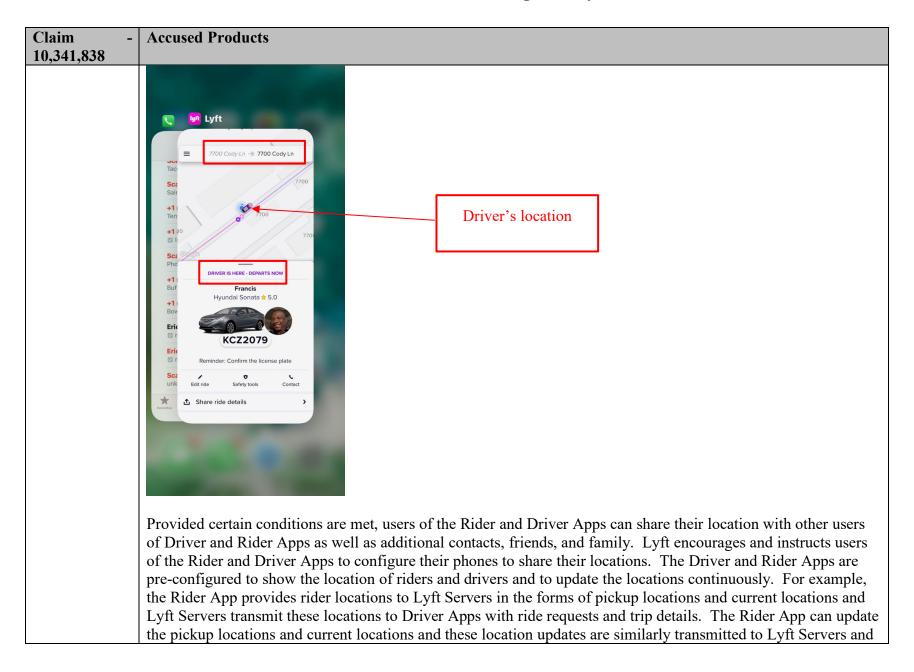
Claim -	Accused Products
10,341,838	
	Source: https://account.lyft.com/auth?next=https%3A%2F%2Fwww.lyft.com%2Flogin%2Fjump.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[F]. receiving vehicle location data provided by the first mobile	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving vehicle location data provided by the first mobile device corresponding to the vehicle, wherein the vehicle location data are associated with the first identifier and indicate coordinates of a geographical location of the first mobile device.
device corresponding to the vehicle, wherein the vehicle location data are associated with the first identifier and	The Lyft server(s) perform this limitation when they receive driver location data associated with the account or identity information described above. This information is received at the Lyft server(s) via the Lyft app for drivers. For example, when a driver is online and ready to take request for rides, the driver's app sends its location coordinates to the Lyft servers enabling the servers to match the driver with the nearby passengers. The location data of the driver is associated with his/her account or identity data described above, including but not limited to name, phone number and vehicle information. The driver's location data comprises geographical coordinates or geotagged/geocoded/georeferenced information related to a driver's geographical location.
indicate coordinates of a geographical location of the first mobile device	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 547 of 1092



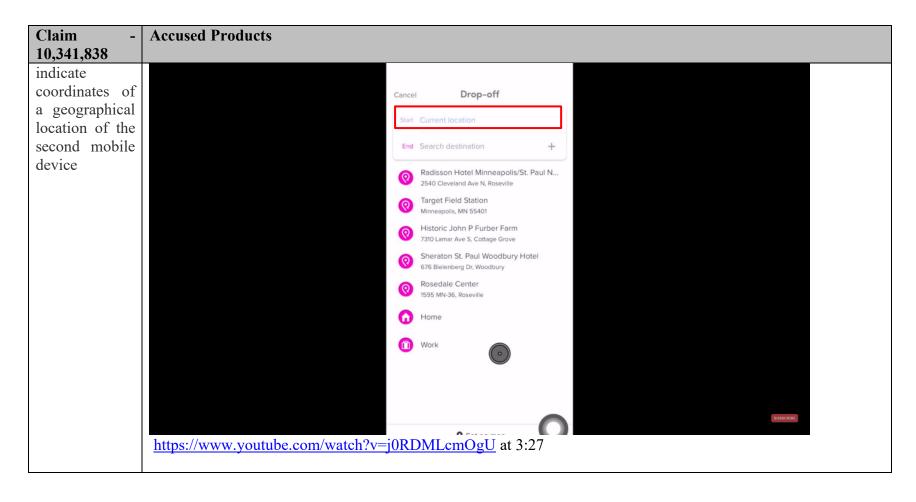
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 548 of 1092



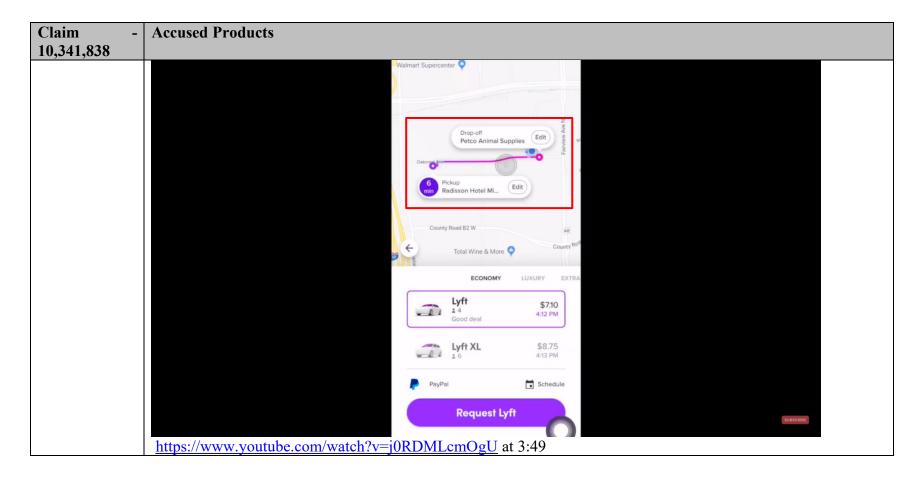


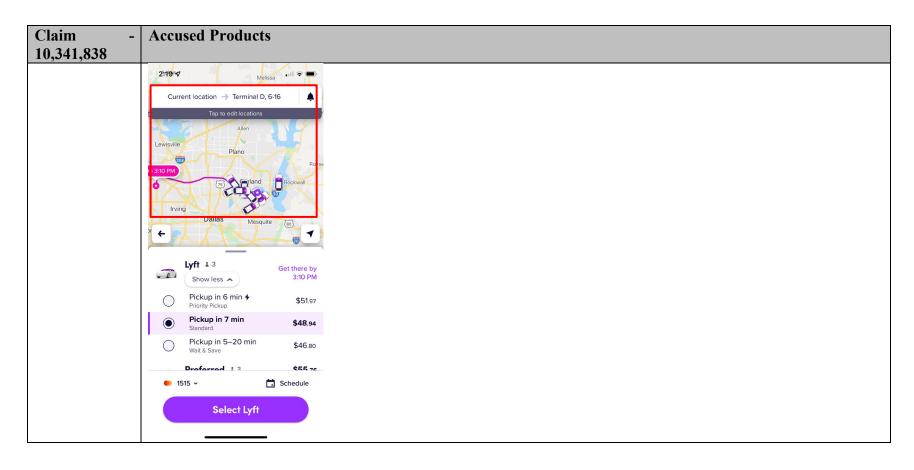
Accused Products
Driver Apps. In another example, the Driver App provides driver locations to Lyft Servers immediately during sign up or log in to the Driver App and continuously provides updates to the Lyft Servers before, during, and after rides. The Rider App can show the location of drivers before requesting a ride, after requesting a ride, after being matched with a particular driver, during the approach of the driver, and during the ride until the completion of the ride. In other circumstances, Rider and Driver Apps are configured by Lyft to permit users to share their locations with others by specifying contacts, friends, family members. In some instances, Lyft Servers create a link for distribution to others for access to maps containing shared locations from Lyft Servers. These shared locations permit others to track the locations of riders and drivers during rides provided by Lyft. Location sharing in Lyft's products also enables features to view and share trip progress and to track locations and computed routes. These features are built in to the Rider and Driver Apps and serviced by Lyft Servers. Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving participant location data provided by the second mobile device corresponding to the participant, wherein the participant location data are associated with the second identifier and indicate coordinates of a geographical location of the second mobile device.
The Lyft server(s) perform this limitation when they receive rider location data associated with the account or identity information described above. This information is received at the Lyft server(s) via the Lyft app for riders. For example, when a passenger books a ride, the passenger's Lyft app for riders sends its current location coordinates to the Lyft servers enabling the servers to match the passenger with the nearby drivers. The location data of the passenger is associated with his/her account or identity data described above including but not limited to username, email address and phone number. The rider's location data comprises geographical coordinates or geotagged/geocoded/georeferenced information related to a rider's geographical location.

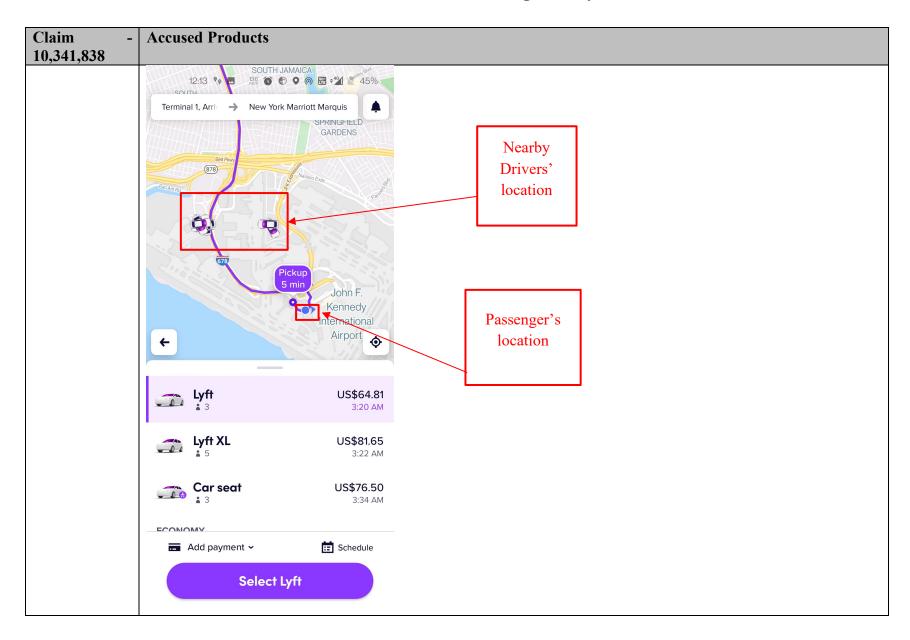
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 551 of 1092

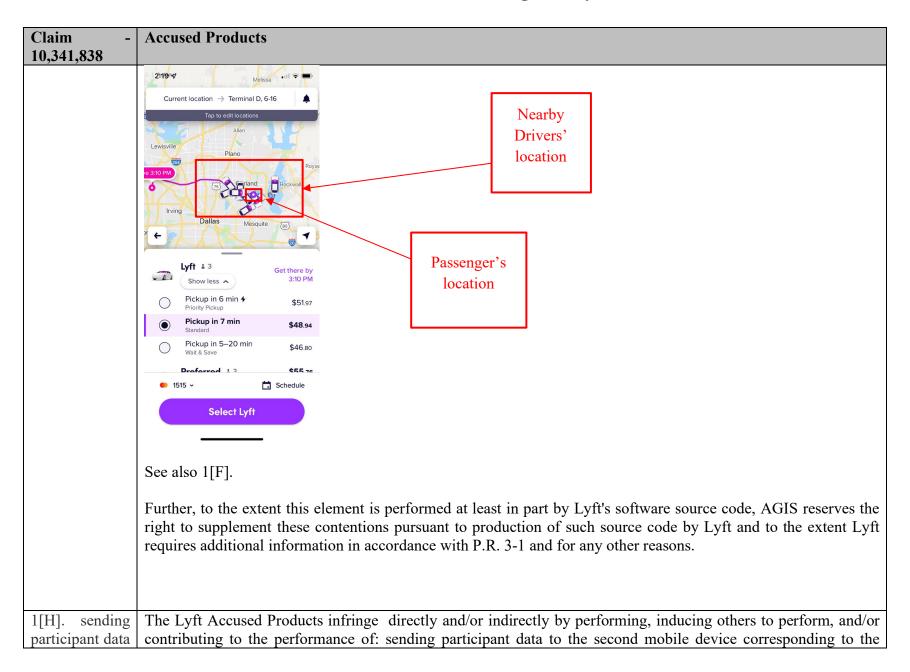


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 552 of 1092

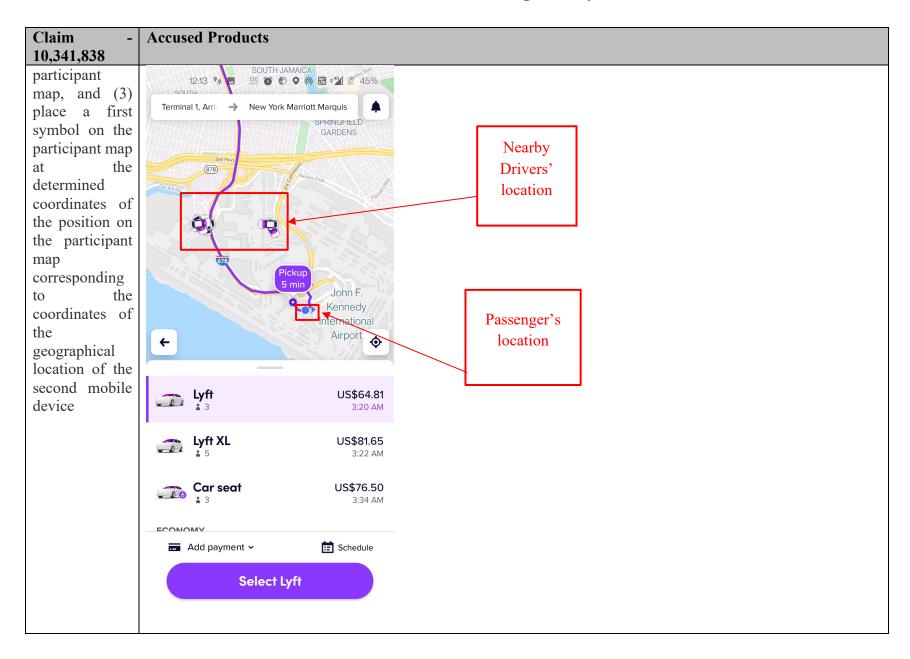


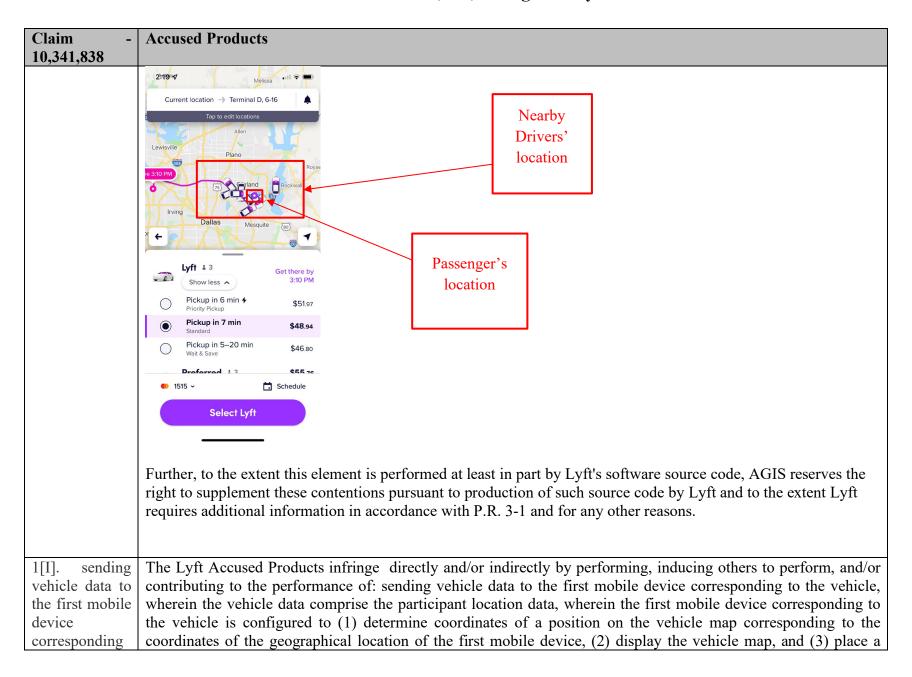




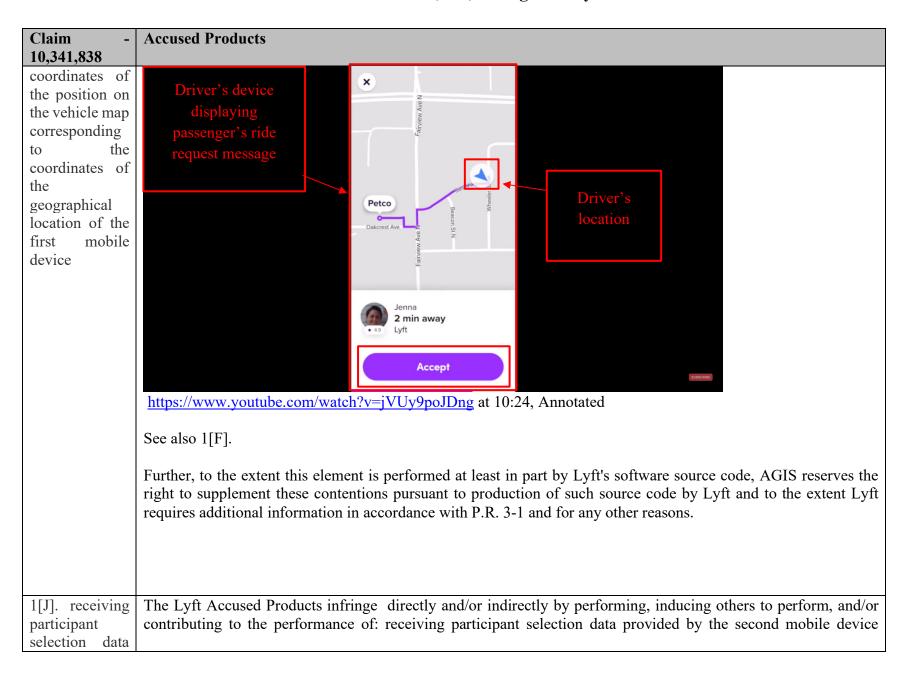


Claim -	Accused Products
to the second mobile device corresponding to the participant, wherein the participant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a position on the participant map	participant, wherein the participant data comprise the vehicle location data, wherein the second mobile device corresponding to the participant is configured to (1) determine coordinates of a position on the participant map corresponding to the coordinates of the geographical location of the second mobile device, (2) display the participant map, and (3) place a first symbol on the participant map at the determined coordinates of the position on the participant map corresponding to the coordinates of the geographical location of the second mobile device. The Lyft server(s) communicates driver geographical location to the rider's Lyft app. The rider's lyft app is programmed to receive the driver location data and process it to display a map with a symbol indicating the driver's location on the map. The rider's Lyft app includes instructions for placing the symbol at the map location corresponding to the geographical coordinates of the driver (i.e. its vehicle). For example, when the Lyft passenger uses the Lyft app, the passenger views the location of the vehicle/driver because the Lyft server(s) transmits the current location data of the drivers for display on a map showing nearby drivers' vehicles ("vehicle location data") as per their location coordinates. In another example, after the passenger requests a ride or begins a ride, the Lyft server(s) communicate the driver's location to the passenger's Lyft app for riders and this location is displayed as a symbol on the map to the passenger. Further, the Lyft app for riders determines the passenger location coordinates from the location data received from the server and adds a symbol corresponding to the coordinates on the map.
the participant	
to the coordinates of the	
geographical location of the second mobile device, (2)	
display the	



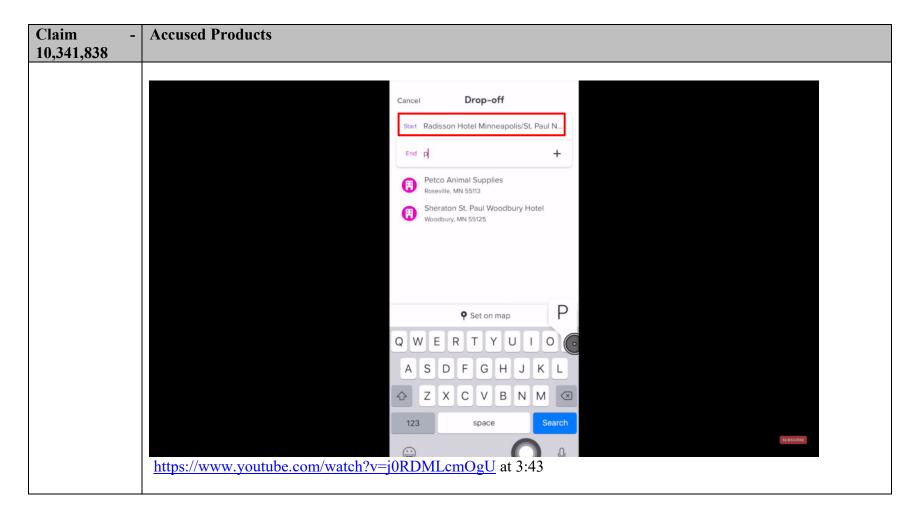


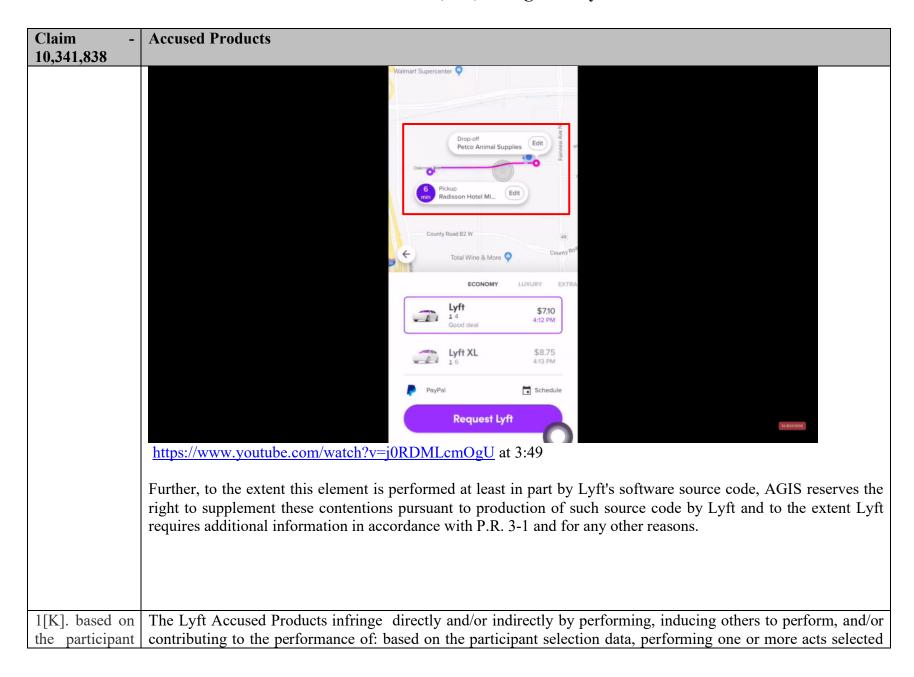
Claim - 10,341,838	Accused Products
to the vehicle, wherein the	second symbol on the vehicle map at the determined coordinates of the position on the vehicle map corresponding
wherein the vehicle data	to the coordinates of the geographical location of the first mobile device;
1	
participant location data,	The Lyft server(s) communicates rider/passenger geographical location to the driver's Lyft app. The driver's lyft
wherein the	app is programmed to receive the driver location data and process it to display a map with a symbol indicating the
first mobile	rider's location on the map. The driver's Lyft app includes instructions for placing the symbol at the map location
device	corresponding to the geographical coordinates of the rider.
corresponding	corresponding to the geographical coordinates of the fider.
to the vehicle is	For example, when the Lyft driver uses the Lyft app, the driver can see the location of a passenger/rider because the
configured to	server transmits the location data of the passenger/rider. The driver, when using the Lyft app for drivers, receives
(1) determine	messages from the passengers requesting rides. The message comprises the passenger's location on the map. The
coordinates of	Driver's Lyft app determines the location coordinates from the rider location data received from the Lyft server and
a position on	places a symbol corresponding to the coordinates of the rider's location on the map in the driver's Lyft app.
the vehicle map	places a symbol corresponding to the coordinates of the fider's location on the map in the driver's Lyft app.
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
first mobile	
device, (2)	
display the	
vehicle map,	
and (3) place a	
second symbol	
on the vehicle	
map at the	
determined	



Claim - 10,341,838	Accused Products
provided by the second mobile device corresponding to the	corresponding to the participant, the participant selection data corresponding to user input provided via a display of the second mobile device.
participant, the participant selection data corresponding to user input provided via a	The Lyft server(s) receives data indicating input from the rider/passenger via the Lyft app for riders. For example, the Lyft passenger provides input specifying a pickup location (current location or any specific location) and destination when booking a ride or specifying a change/update to a ride such as adding a stop or changing a pickup or destination. This input is the only participant selection data.
display of the	Cancel Drop-off
second mobile device	Start Current location
	End Search destination +
	Radisson Hotel Minneapolis/St. Paul N 2540 Cleveland Ave N, Roseville
	Target Field Station Minneapolis, MN 55401
	Historic John P Furber Farm 7310 Lamar Ave S, Cottage Grove
	Sheraton St. Paul Woodbury Hotel 676 Bielenberg Dr, Woodbury
	Rosedale Center 1595 MN-36, Roseville
	♠ Home
	(1) Work
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 3:27

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 562 of 1092

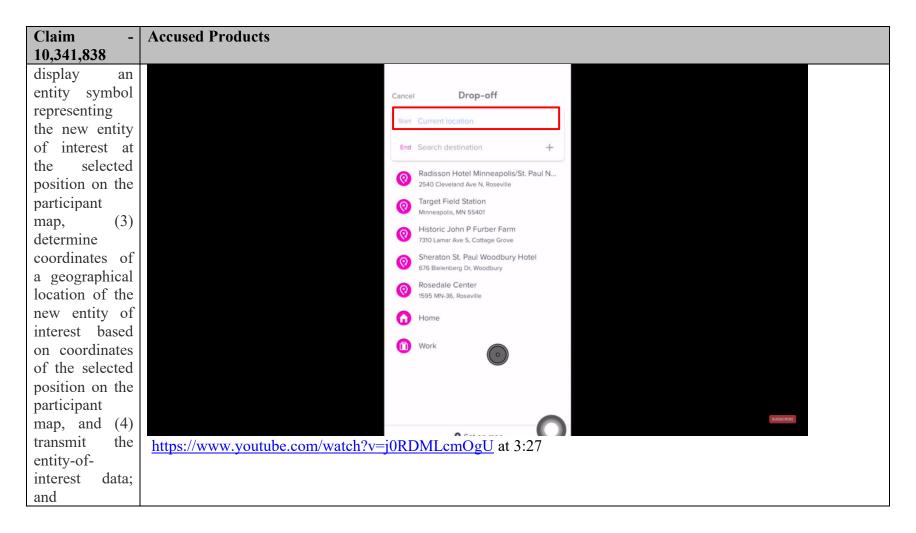


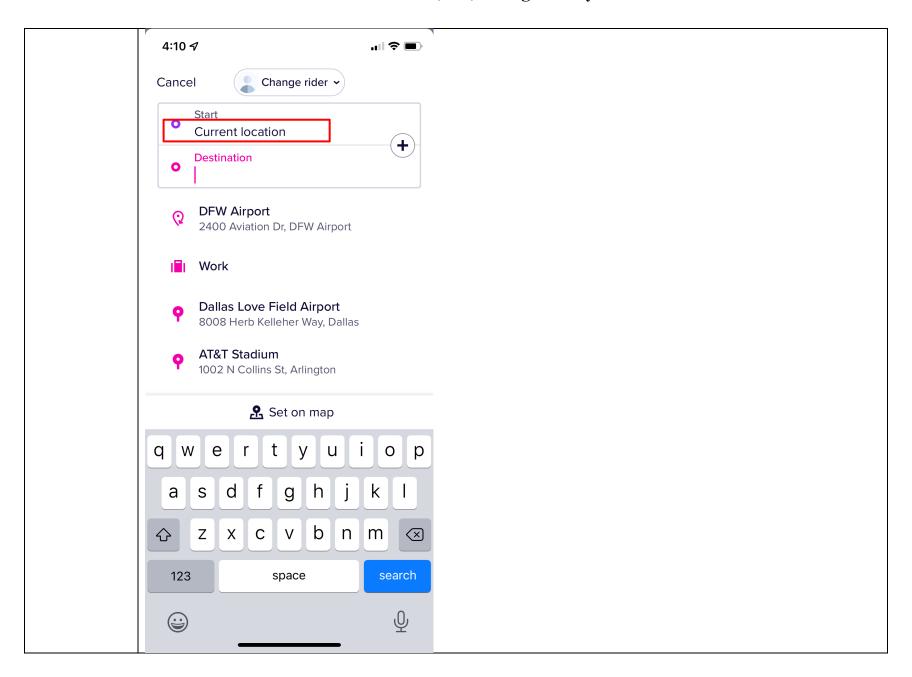


Claim -	Accused Products
10,341,838	
selection data,	from the group consisting of: sending updated vehicle data to the first mobile device corresponding to the vehicle,
performing one	sending updated participant data to the second mobile device corresponding to the participant, and sending a
or more acts	message to the first mobile device corresponding to the vehicle.
selected from	
the group	
consisting of:	
sending	The Lyft server(s) communicate data based on the rider's user input selections described above in 1[J]. The
updated	following are the only acts performed in response to receiving participant selection data identified in 1[J]. The Lyft
vehicle data to	server(s) communicates location/ride/status data and updates for the driver/vehicle to the passenger/rider; the Lyft
the first mobile	server(s) also communicates location/ride/status and updates for the rider/passenger to the driver/vehicle. The Lyft
device	server(s) also communicates messages from the rider to the driver as described above. The Lyft server(s) also
corresponding	communicates updated locations via messages to the rider/driver and updated directions/routes to the driver. The
to the vehicle,	Lyft server(s) communications are sent to the Lyft apps for driver and/or rider. There are no other acts that can be
sending	performed based on the identified participant selection data in 1[J].
updated	Example to the extent this element is nonformed at least in new by Lyiftle software source and ACIS resources the
participant data to the second	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft
mobile device	requires additional information in accordance with P.R. 3-1 and for any other reasons.
corresponding	requires additional information in accordance with F.K. 5-1 and for any other reasons.
to the	
participant, and	
sending a	
message to the	
first mobile	
device	
corresponding	
to the vehicle	
1[L]. receiving	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
entity-of-	contributing to the performance of: receiving entity-of-interest data transmitted by the second mobile device, the
interest data	entity-of-interest data comprising coordinates of a geographical location of a new entity of interest, wherein the
transmitted by	second mobile device is configured to (1) identify participant interaction with a display of the second mobile device,

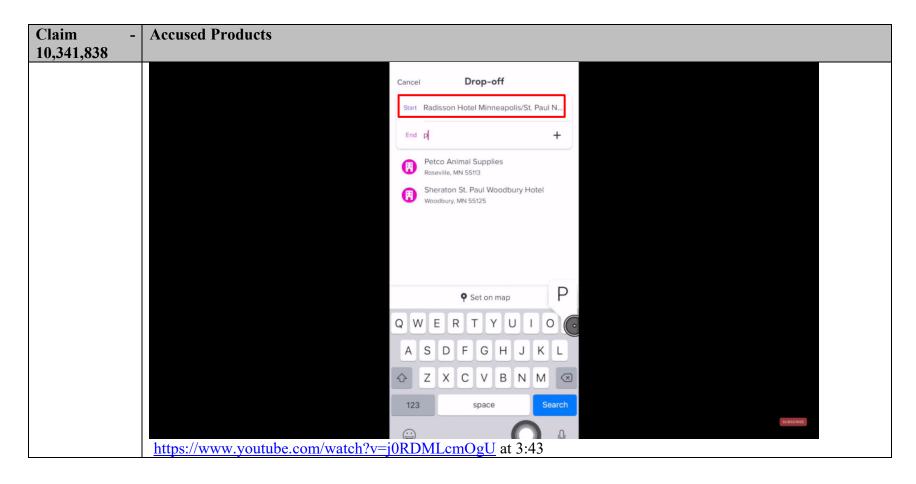
Claim -	Accused Products
the second mobile device, the entity-of-interest data	the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2) display an entity symbol representing the new entity of interest at the selected position on the participant map, (3) determine coordinates of a geographical location of the new entity of interest based on coordinates of the selected position on the participant map, and (4) transmit the entity-of-interest data.
comprising coordinates of a geographical	
location of a new entity of interest, wherein the second mobile device is configured to (1) identify participant interaction with a display of the second	
mobile device, the participant interaction indicating selection of a position on the participant map and entry of the new entity of interest at the selected position, (2)	The passenger provides the pickup location (current address or any specific location) and the destination when booking a ride using the Lyft app for riders indicating selection of a position on the map and entry of the entity at that position. The Lyft passenger can add a second stop or destination via user input in the Lyft app for riders. The Lyft app for riders receives user input regarding the selected location, displays a symbol on the map and determines the geographical location corresponding to the selected location and its coordinates. The rider is also able to edit or add additional stops/destinations and change the order of stops/destinations. The stops/destinations are displayed on the map using symbols.

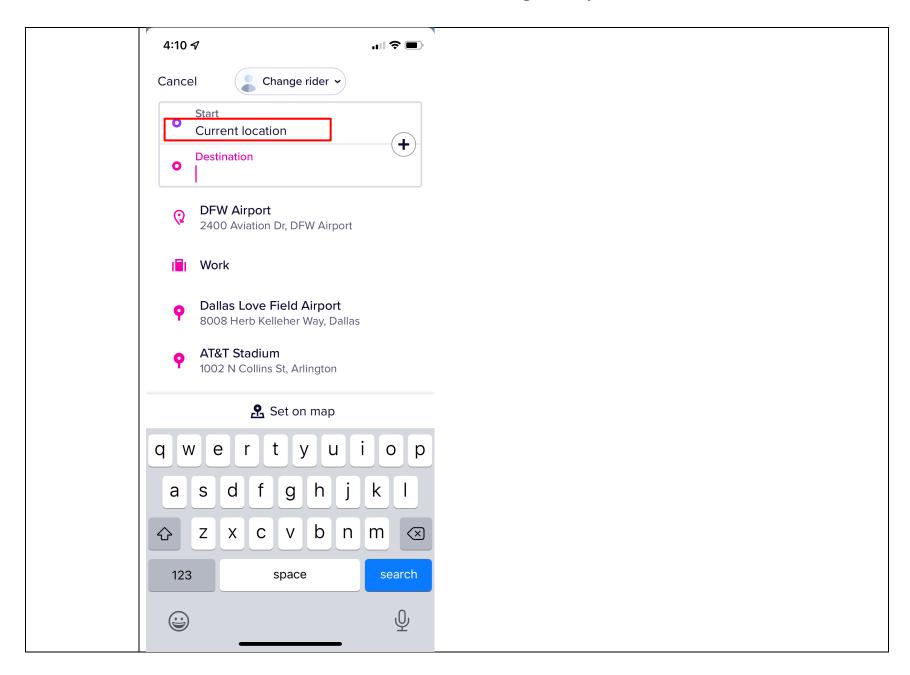
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 566 of 1092



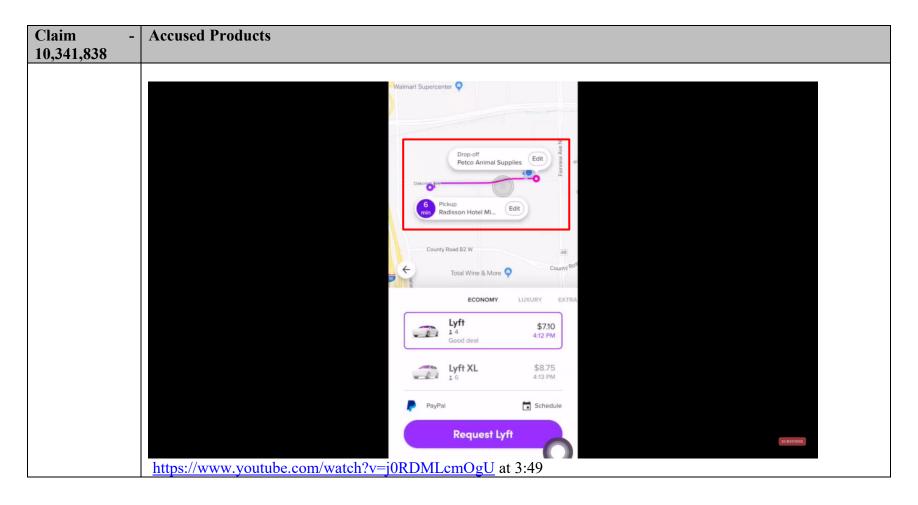


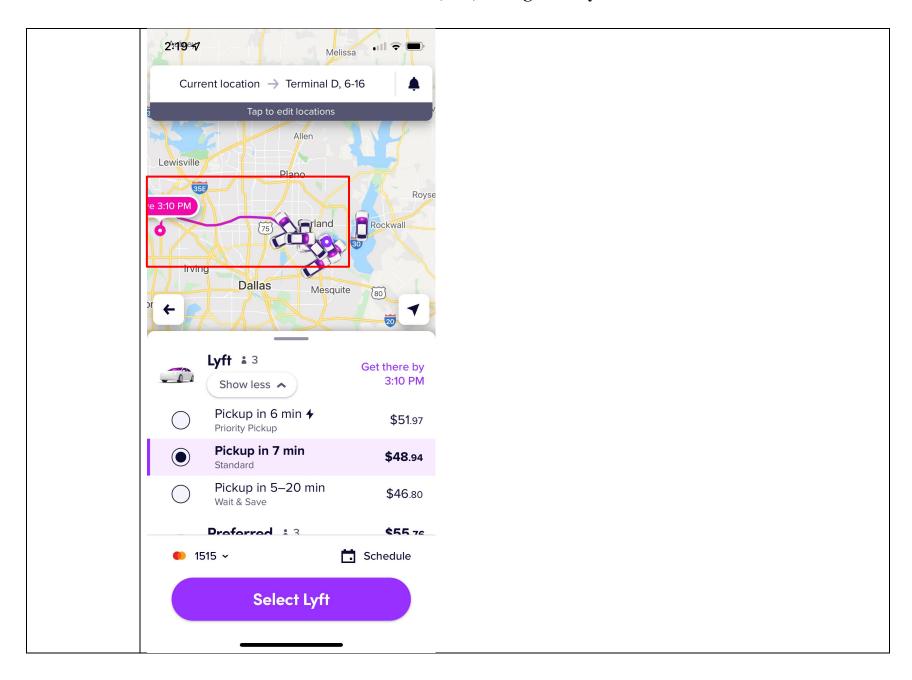
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 568 of 1092





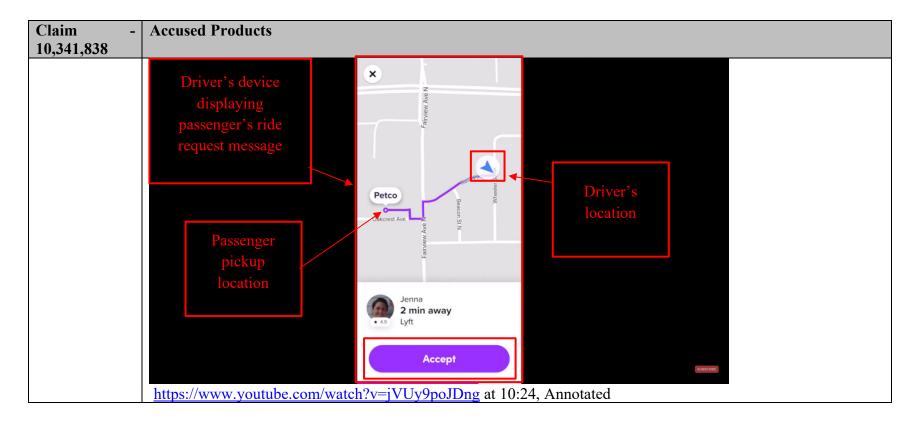
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 570 of 1092

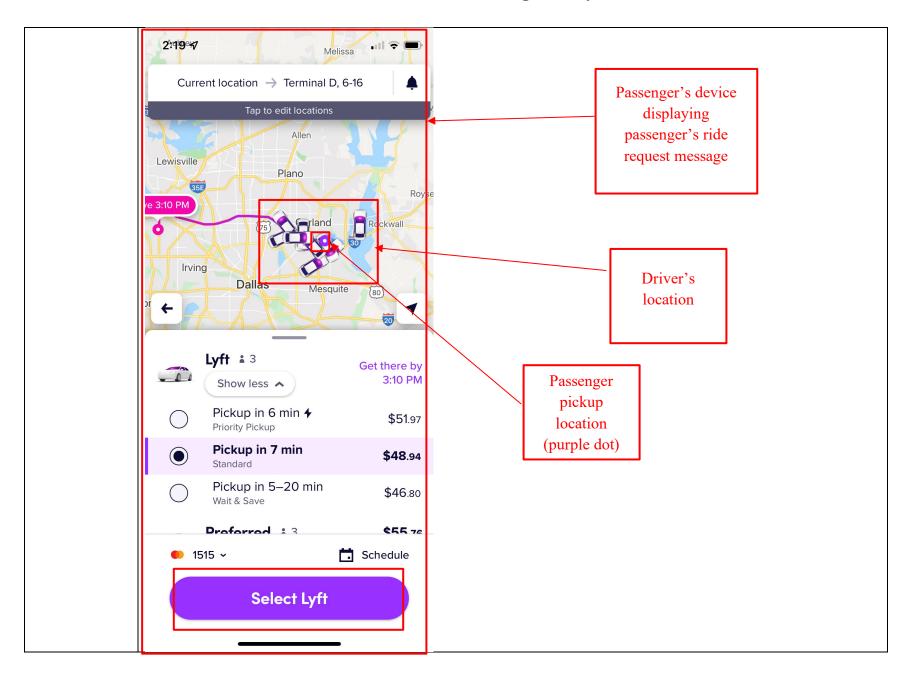


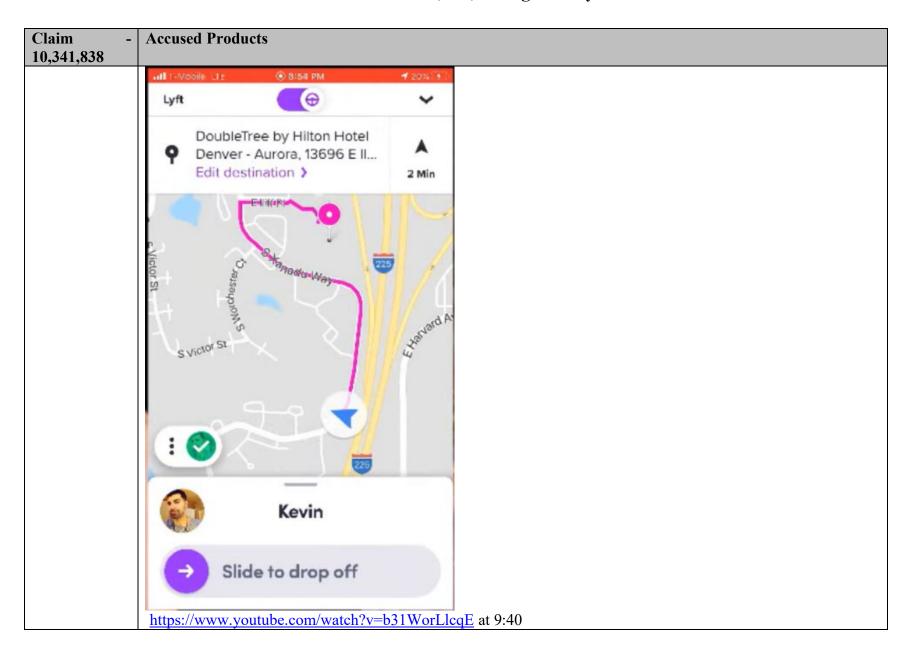


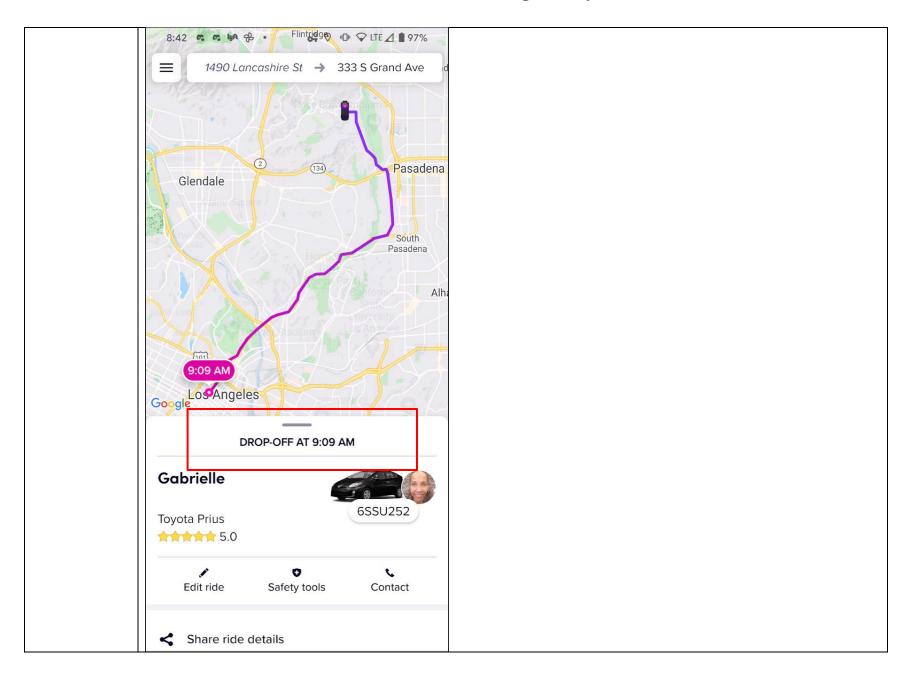
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 572 of 1092

Claim - 10,341,838	Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[M]. sending the entity-of- interest data to the first mobile device corresponding to the vehicle, wherein the	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: sending the entity-of-interest data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to place the entity symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding to the geographical location of the new entity of interest.
first mobile device is configured to place the entity symbol representing the new entity of interest on the vehicle map at a position on the vehicle map corresponding to the geographical location of the new entity of interest.	The Lyft server(s) performs this limitation because the Lyft server(s) communicate data corresponding to the added/entered pickup/stops/destinations to the Lyft app of the driver and symbols are placed at the geographical locations corresponding to the added/entered pickup/destinations/stops. This can occur before or during the acceptance of the ride. The added/entered symbols are displayed on the map at the Lyft app for drivers.



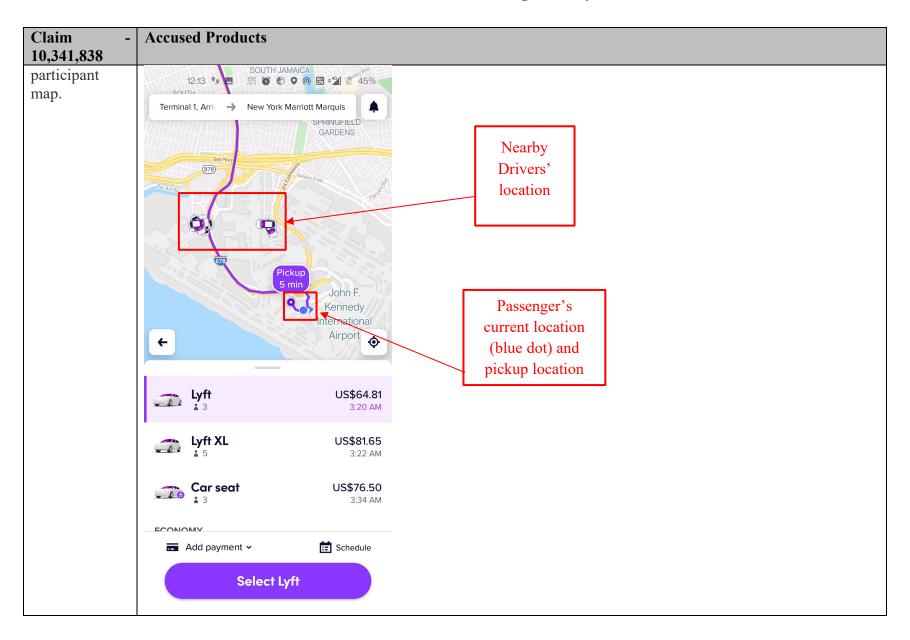


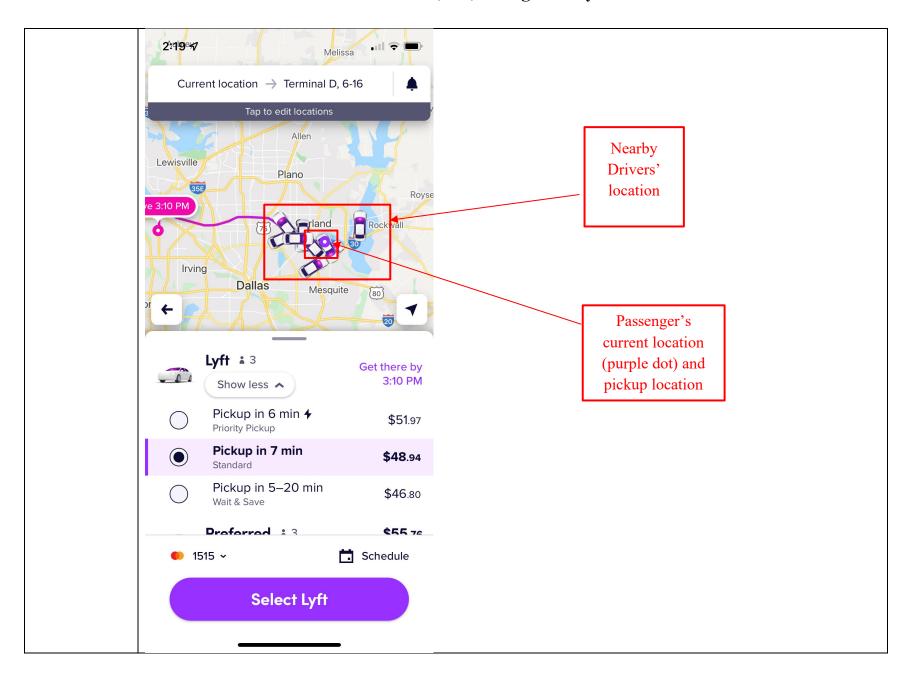




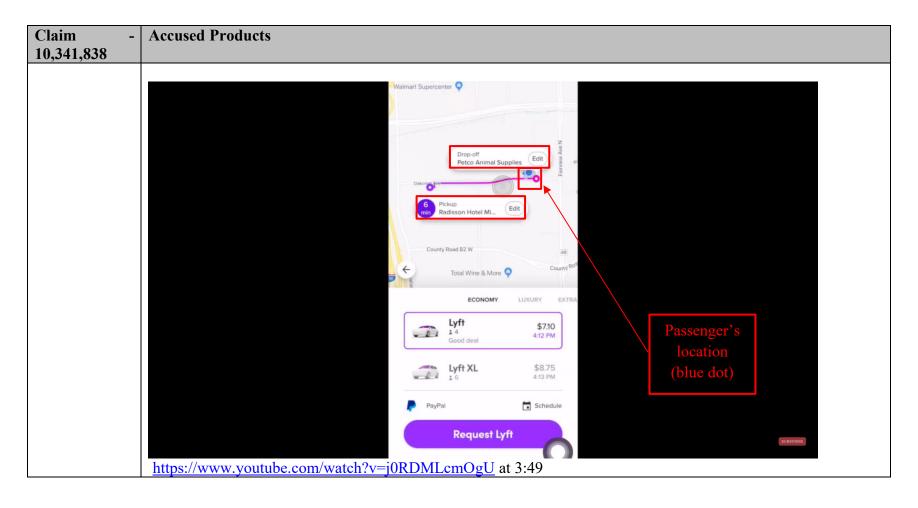
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 577 of 1092

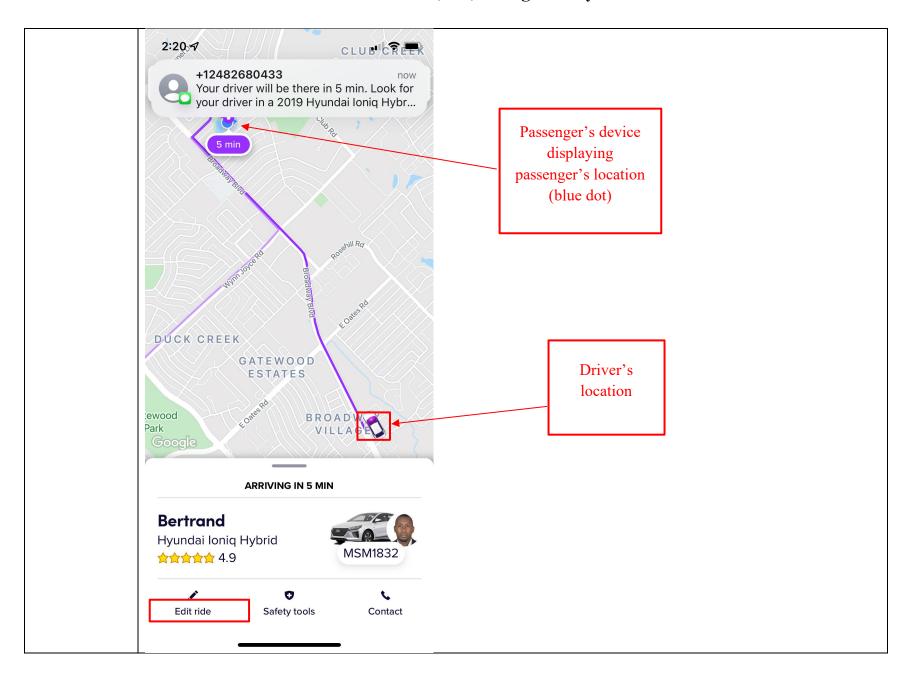
Claim - 10,341,838	Accused Products
10,0 11,000	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
2. The method of claim 1, wherein performing the one or more acts comprises sending, based	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to display the updated participant data within the participant map.
on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to display the updated	See claims 1[F] and 1[H]. The Lyft server(s) meets this limitation because it sends updated driver/vehicle locations to the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app. For example, while the passenger is booking a ride, the server sends the updated current location of the vehicle to the passenger's Lyft app. The updated current location of the vehicle is loaded on the map in the Lyft app. The server also highlights the pickup location and destination address on the map in the Lyft app.
participant data within the	

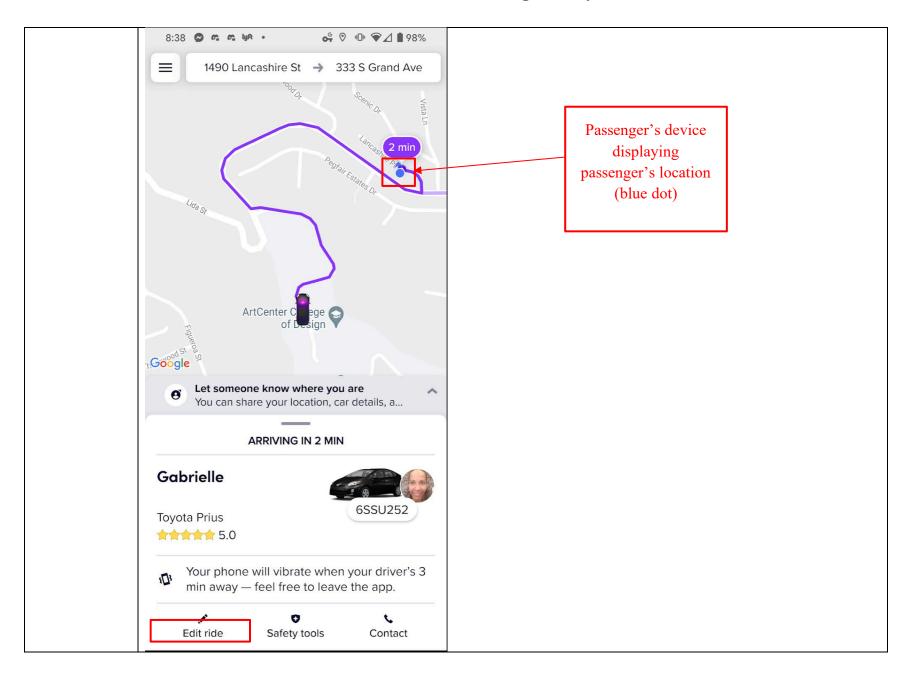




Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 580 of 1092

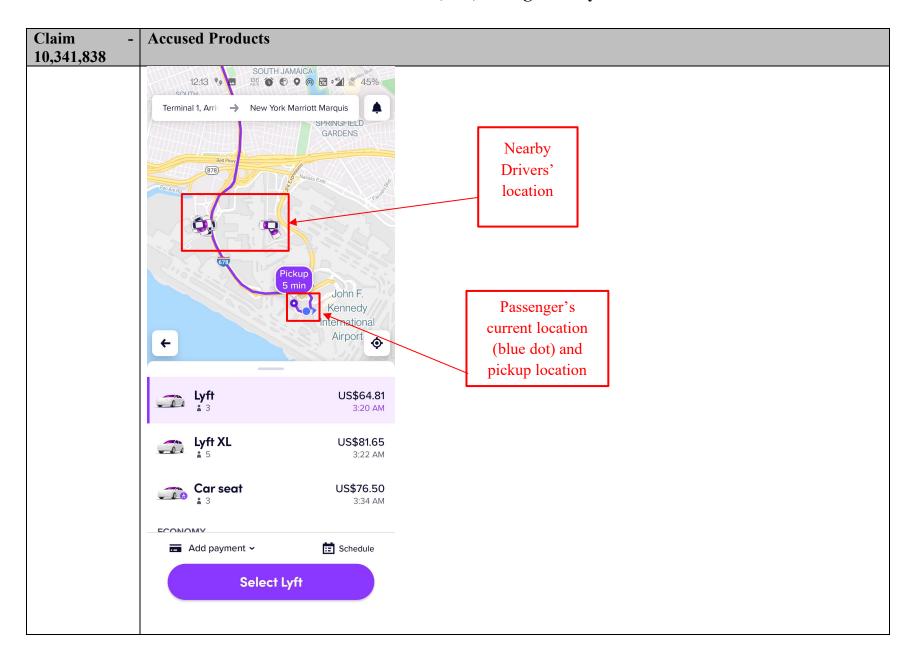


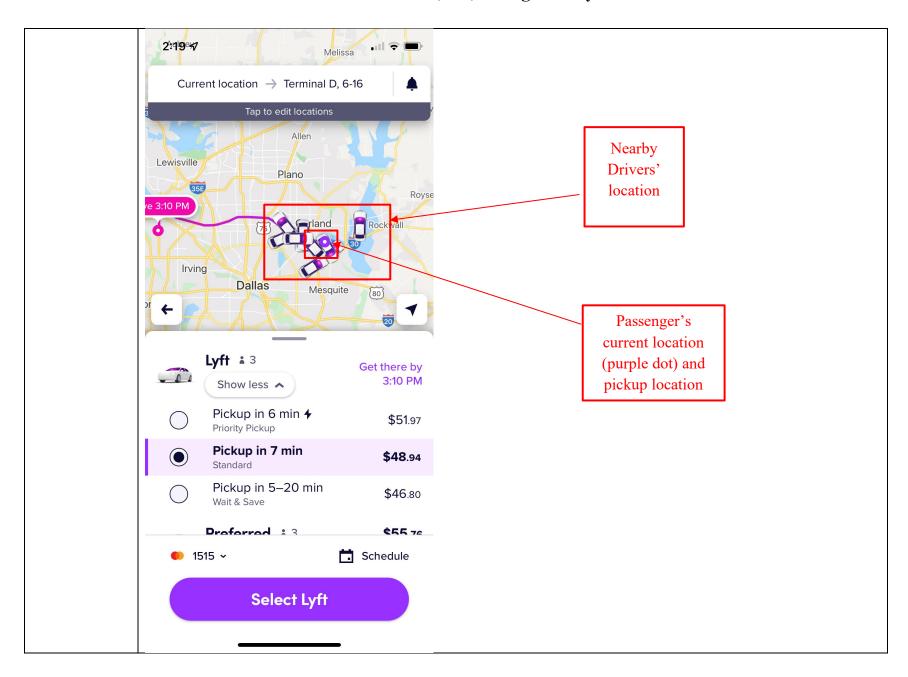




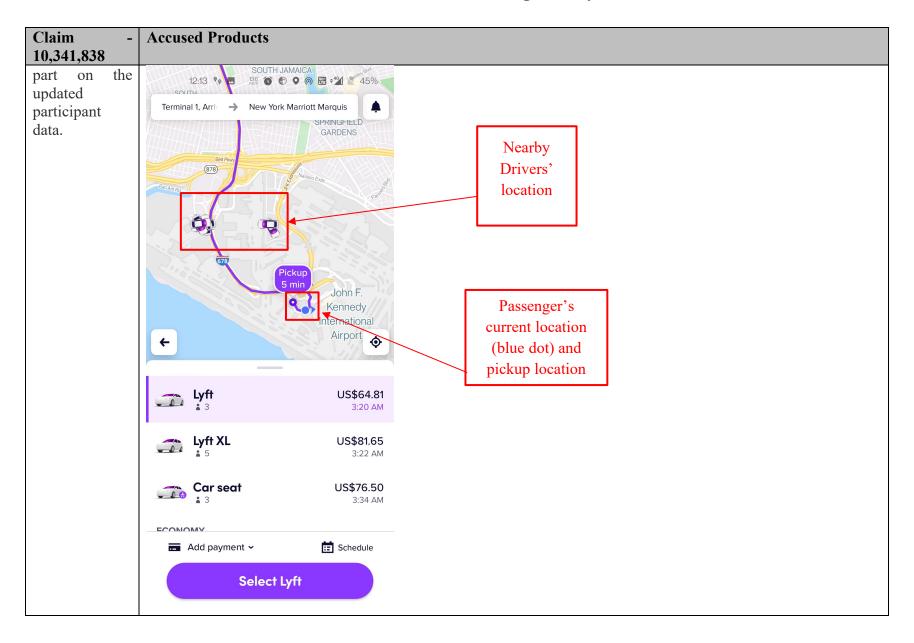
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 583 of 1092

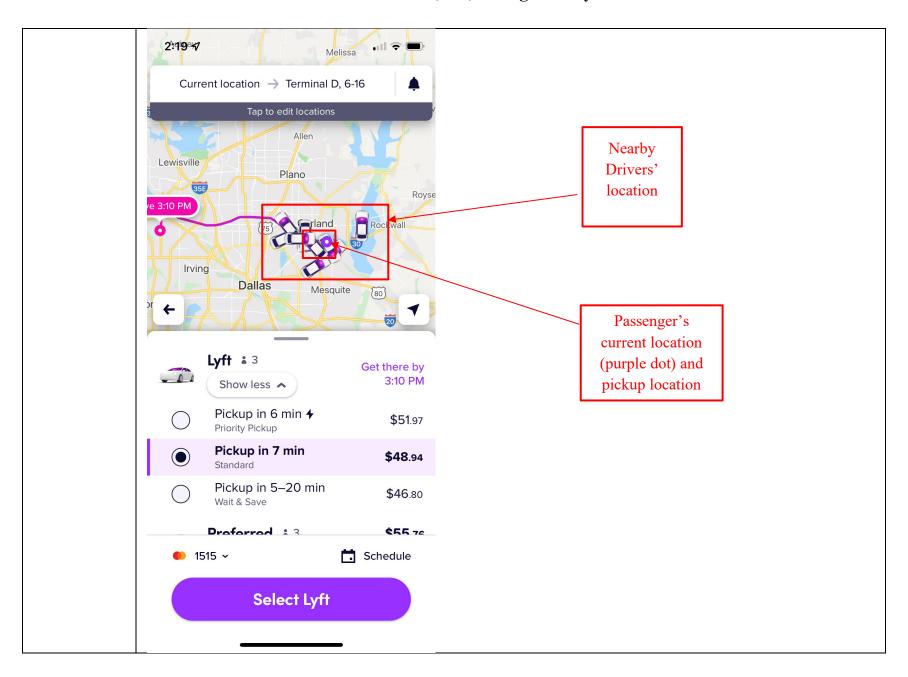
Claim -	Accused Products
10,341,838	
3. The method	
of claim 2,	contributing to the performance of: wherein the updated participant data comprise updated vehicle location data
wherein the	indicating coordinates of an updated geographical location of the first mobile device corresponding to the vehicle.
updated	
participant data	
comprise	
updated	See claims 1[F] and 2. The Lyft server(s) meets this limitation because it sends updated driver/vehicle locations to
vehicle	the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app.
location data	The updated driver/vehicle location is presented on the geographical map at the geographical location. The
indicating	geographical location on the map indicates coodinates for the vehicle.
coordinates of	
an updated	
geographical	
location of the	
first mobile	
device	
corresponding	
to the vehicle.	



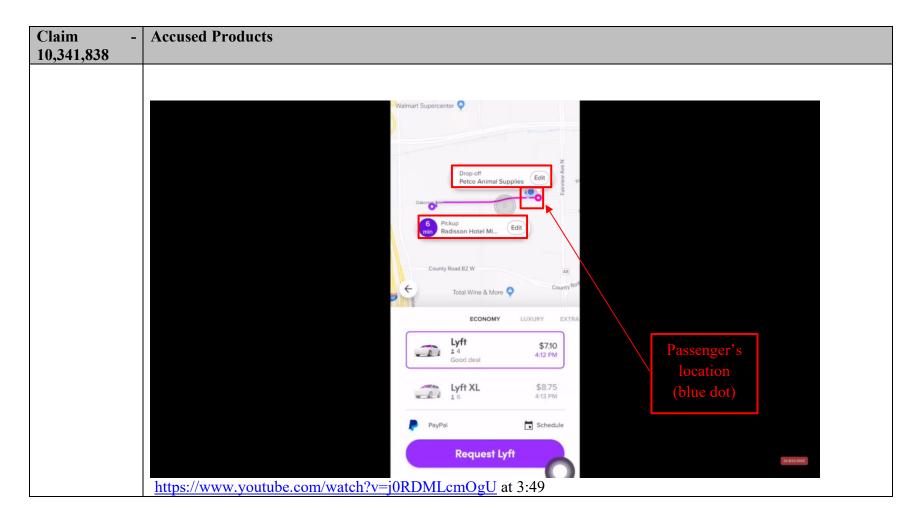


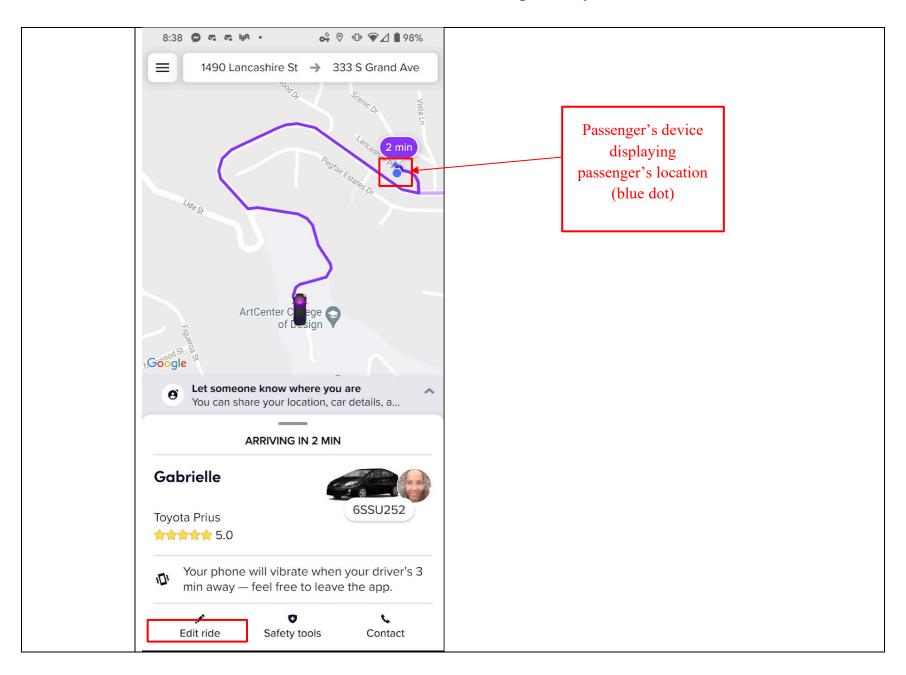
Claim - 10,341,838	Accused Products
4. The method of claim 1, wherein performing the	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated participant data to the second mobile device corresponding to the participant, wherein the second mobile device is configured to replace the participant map with an updated participant map on
one or more acts comprises sending, based on the	the display of the second mobile device based at least in part on the updated participant data.
participant selection data, the updated participant data to the second	See claims 1[F] and 1[H]. The Lyft server(s) meets this limitation because it sends the driver/vehicle locations to the Lyft app for riders and that updated driver/vehicle location is provided for display to the rider via the Lyft app. The Lyft server sends updated map data or maps to the Lyft app for riders when a new location requires the presentation of a new map, i.e. when the location is changed or when the user moves/pans/modifies the map or when the user navigates within or outside the Lyft app and returns to the app.
mobile device corresponding to the participant,	
wherein the second mobile device is configured to	
replace the participant map with an updated	
participant map on the display of the second mobile device based at least in	





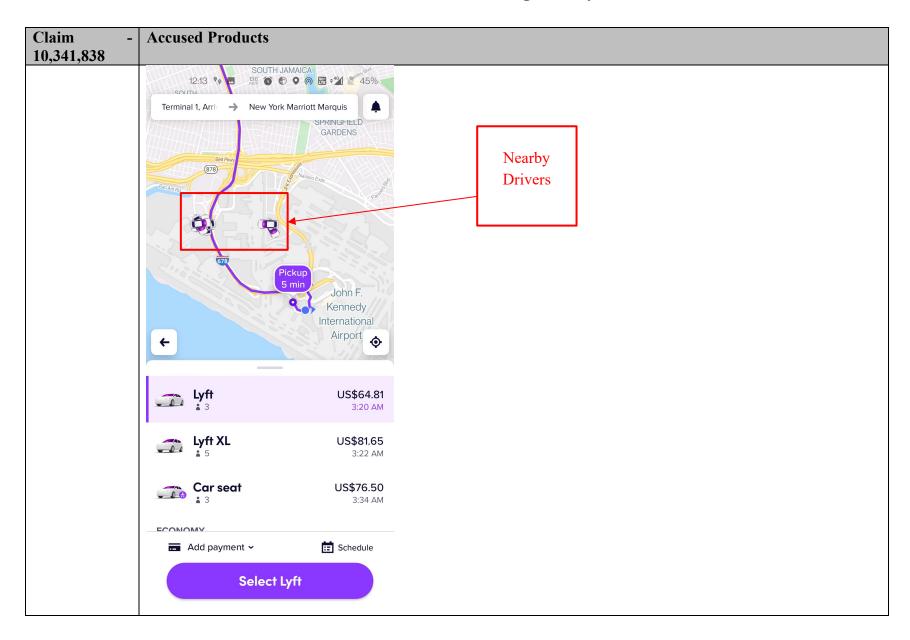
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 589 of 1092

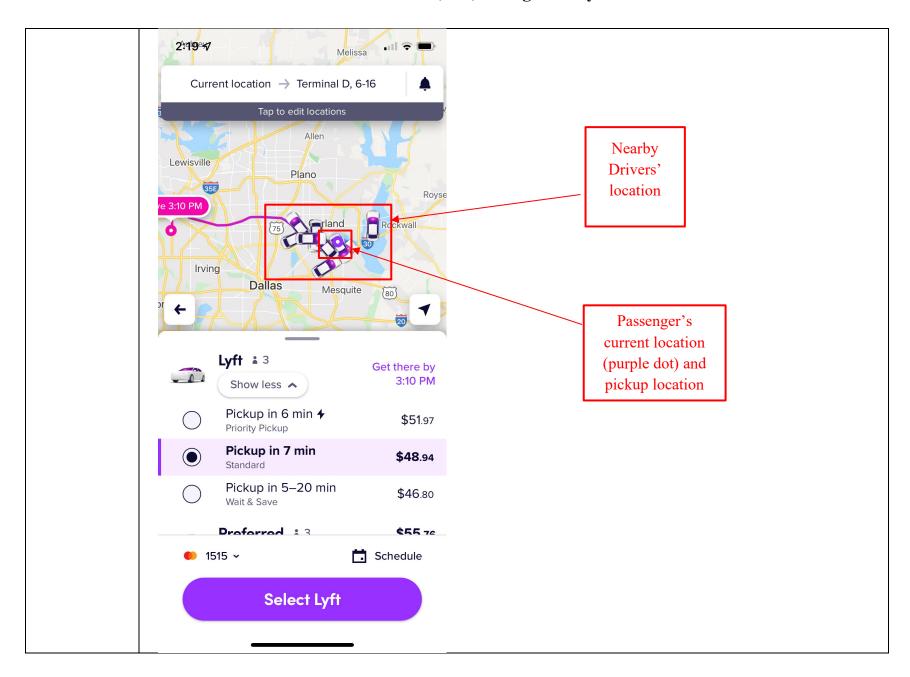


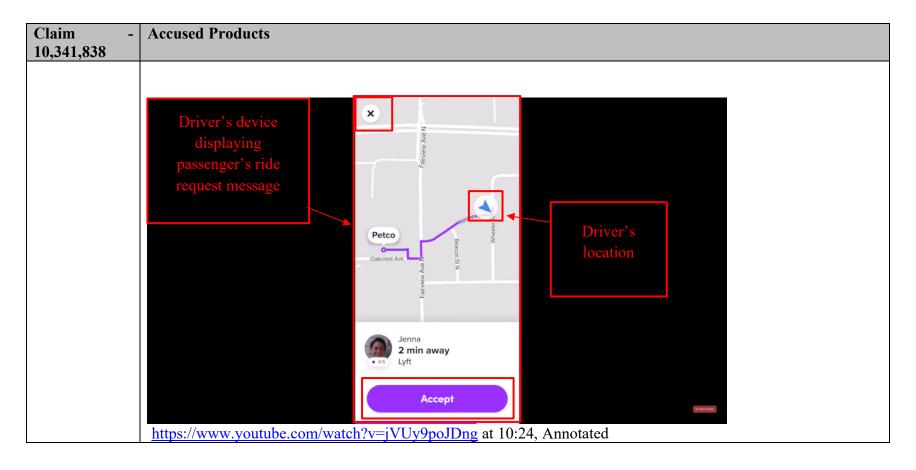


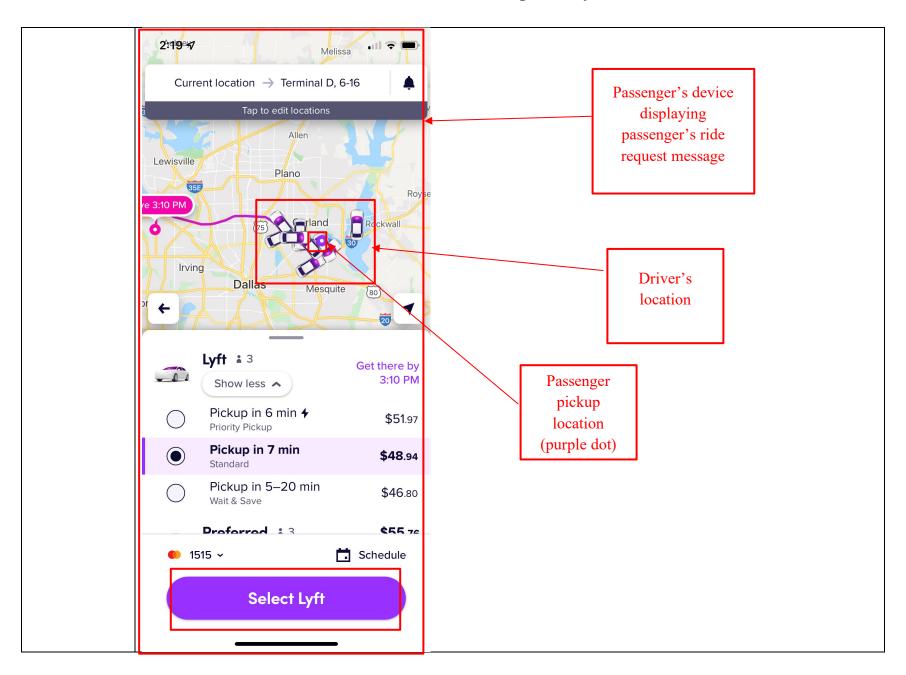
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 591 of 1092

Claim -	Accused Products
10,341,838	
5. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: wherein performing the one or more acts comprises sending, based on the
wherein	participant selection data, the message to the first mobile device corresponding to the vehicle.
performing the	
one or more	
acts comprises	
sending, based	See claim 1[I]. The Lyft server(s) meets this limitation because it sends data corresponding to selections made in
on the	the Lyft app for riders to the Lyft app for drivers. For example, when the passenger books a ride by providing a
participant	pickup location and destination address ("participant selection data"), the server communicates the ride request
selection data,	message to the Lyft apps of the nearby drivers asking them to either accept or decline the ride. In other examples,
the message to	the Lyft server receives selections from the riders's Lyft app before or during a ride and communicates messages to
the first mobile	the Lyft app for drivers.
device	
corresponding	
to the vehicle	

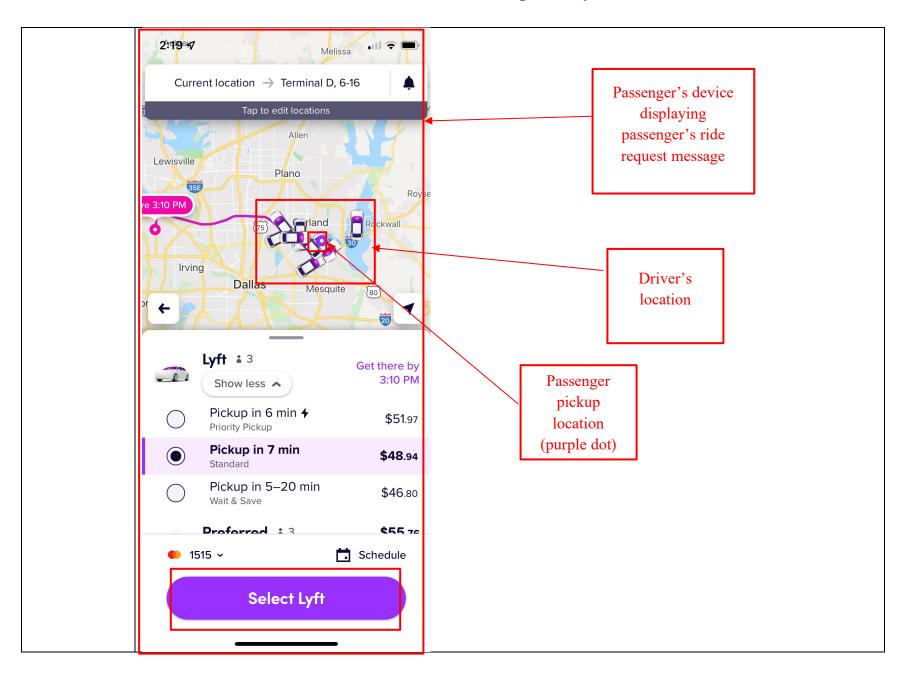




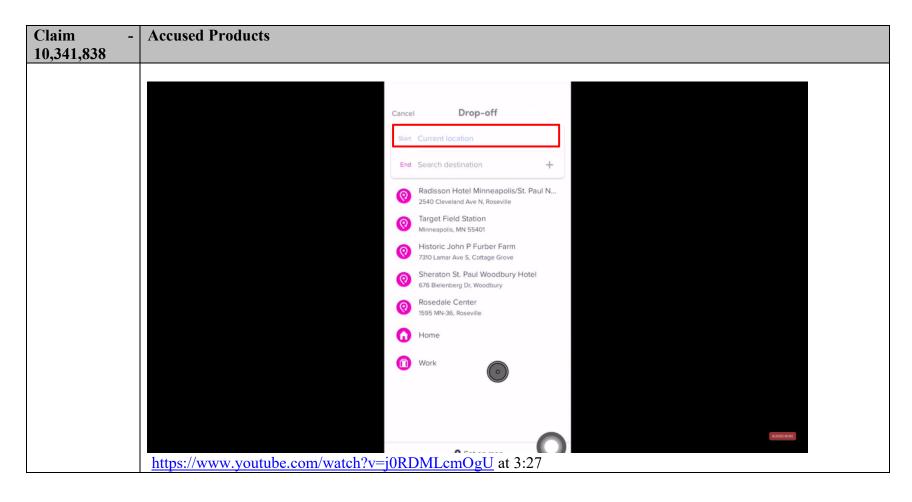


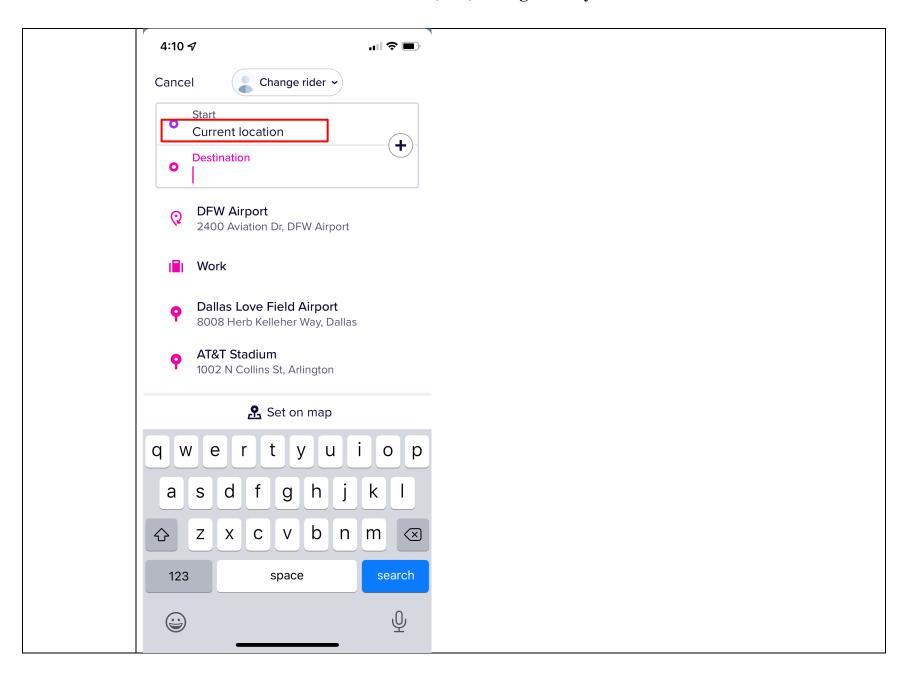


Claim - 10,341,838	Accused Products
	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein the message to the first mobile device corresponding to the vehicle includes the second identifier and updated participant location data. See claims 1[I] and 5. The Lyft server(s) meets this limitation because it sends data corresponding to selections made in the Lyft app for riders to the Lyft app for drivers. The Lyft server communicates information including the account/identity information for the rider and the updated location of the rider to the Lyft app for driver. This can occur during the ride request or during the ride. Driver's device displaying passenger's ride request message Passenger's pickup location
	Accept https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated

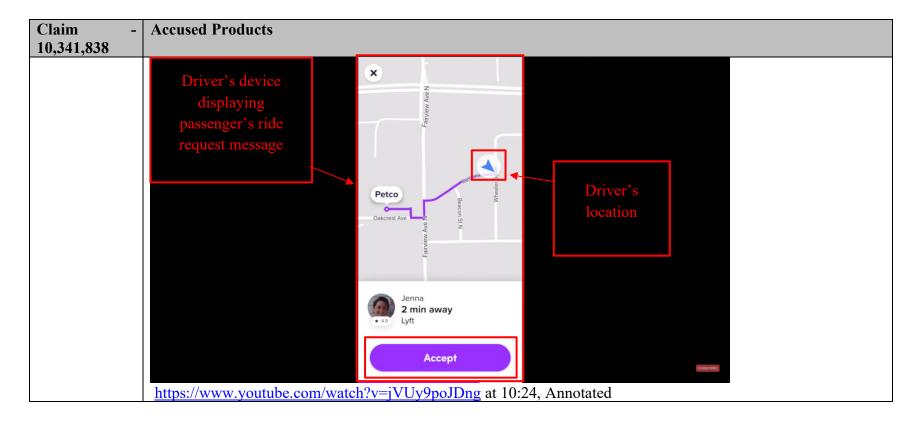


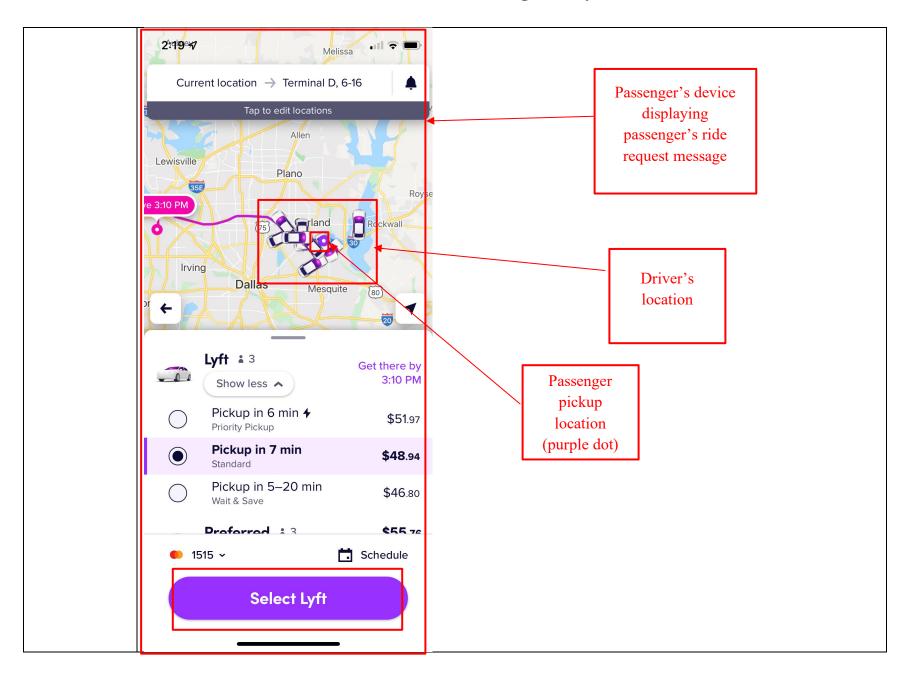
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 598 of 1092





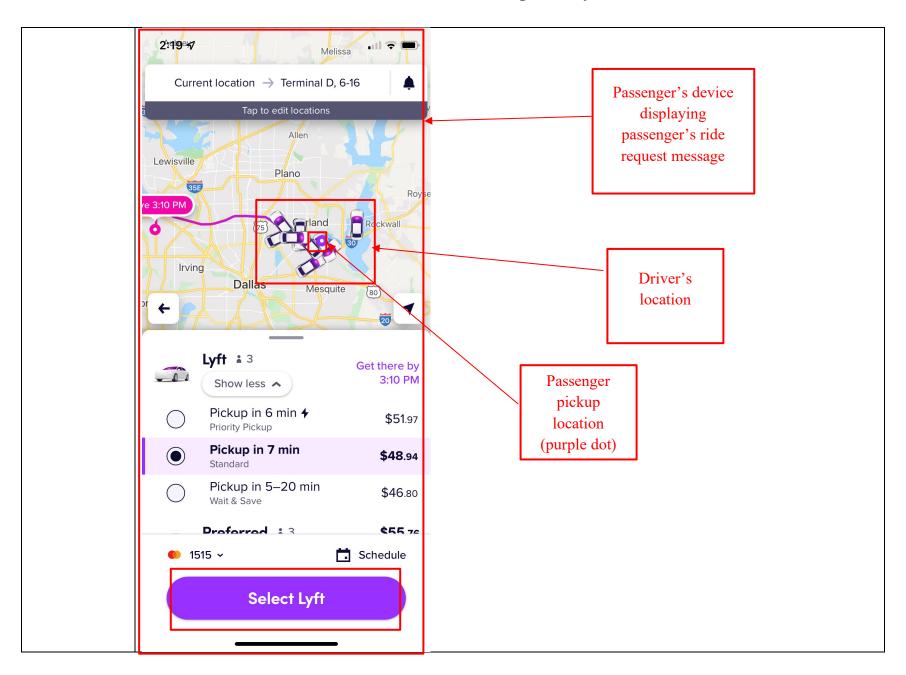
Claim - 10,341,838	Accused Products
-)-	
7. The method of claim 1, wherein performing the one or more acts comprises	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to display the updated vehicle data within the vehicle map.
sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the	See claims 1[I] and 1[J]. The Lyft server(s) meets this limitation because it sends updated rider location to the Lyft app for drivers and the location is displayed in the Lyft app for drivers. This can occur before or during a ride. For example, after the passenger books the ride by providing the pickup address and destination address ("participant selection data"), the server sends the updated current location of the rider to the driver's Lyft app. Also, the rider can update this selection data or can transmit a new location to the driver's Lyft app for display.
first mobile device is configured to	
display the updated	
vehicle data within the vehicle map.	



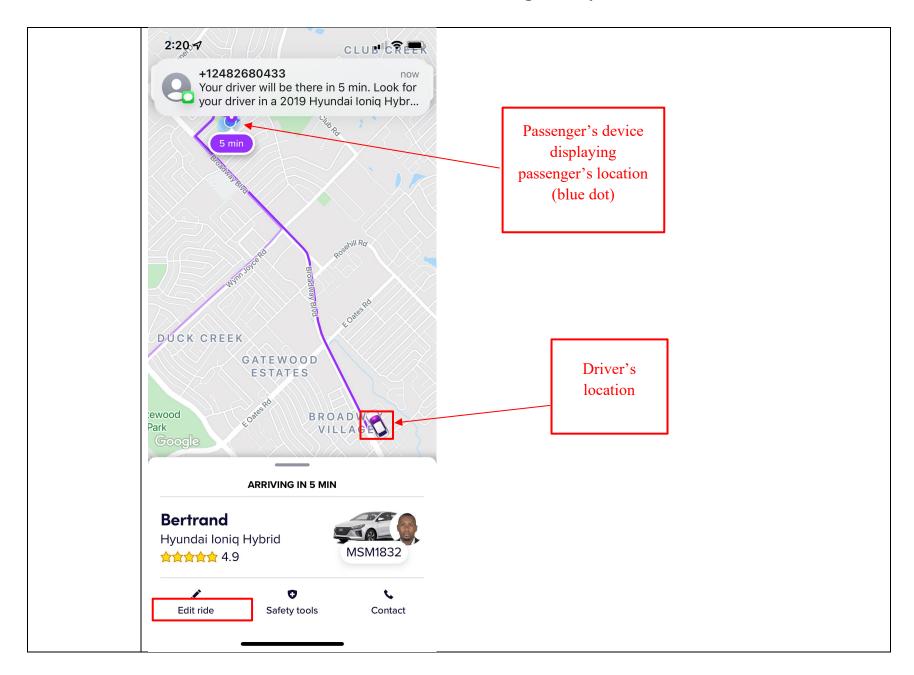


Claim - 10,341,838	Accused Products
10,541,050	
8. The method of claim 1, wherein performing the one or more acts comprises sending, based	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein performing the one or more acts comprises sending, based on the participant selection data, the updated vehicle data to the first mobile device corresponding to the vehicle, wherein the first mobile device is configured to replace the vehicle map with an updated vehicle map on the display of the first mobile device based at least in part on the updated vehicle data.
on the	
participant	See claims 1[I] and 1[J]. The Lyft server(s) meets this limitation because it sends the rider locations to the Lyft app
selection data, the updated vehicle data to	for drivers and that updated rider location is provided for display to the driver via the Lyft app. The Lyft server sends updated map data or maps to the Lyft app for drivers when a new location requires the presentation of a new map, i.e. when the location/route/direction is changed or when the user moves/pans/modifies the map or when the
the first mobile	user navigates within or outside the Lyft app and returns to the app.
device	
corresponding	
to the vehicle, wherein the	
first mobile	
device is	
configured to	
replace the	
vehicle map	
with an	
updated	
vehicle map on	
the display of	
the first mobile	
device based at	
least in part on	





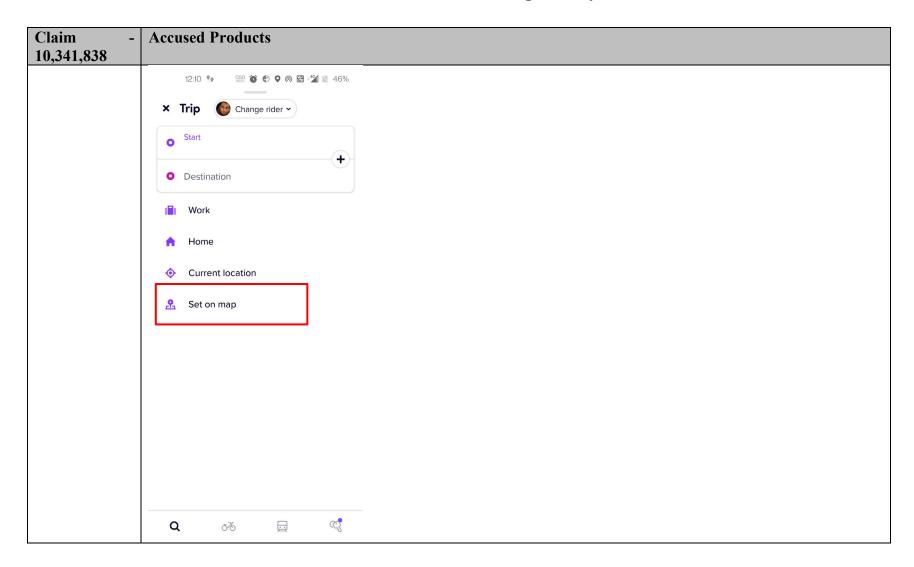
Claim - 10,341,838	Accused Products
	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein the vehicle map is interactive. See claim 1. The Lyft server(s) meets this limitation because the user of the Lyft app can interact with the maps provided by the server.
	Petco Dakcrest Ave Denna 2 min away Lyft
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24

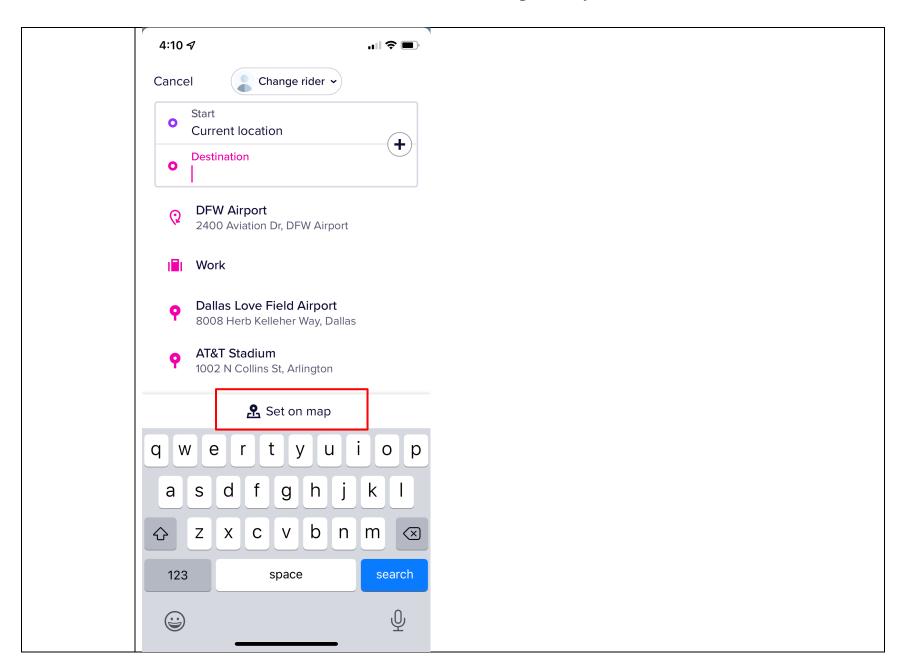


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 608 of 1092

Claim -	Accused Products
10,341,838	
10. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: wherein the participant map is interactive.
wherein the	
participant map	
is interactive.	
	See claim 1. The Lyft server(s) meets this limitation because the user of the Lyft app can interact with the maps
	provided by the server.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 609 of 1092

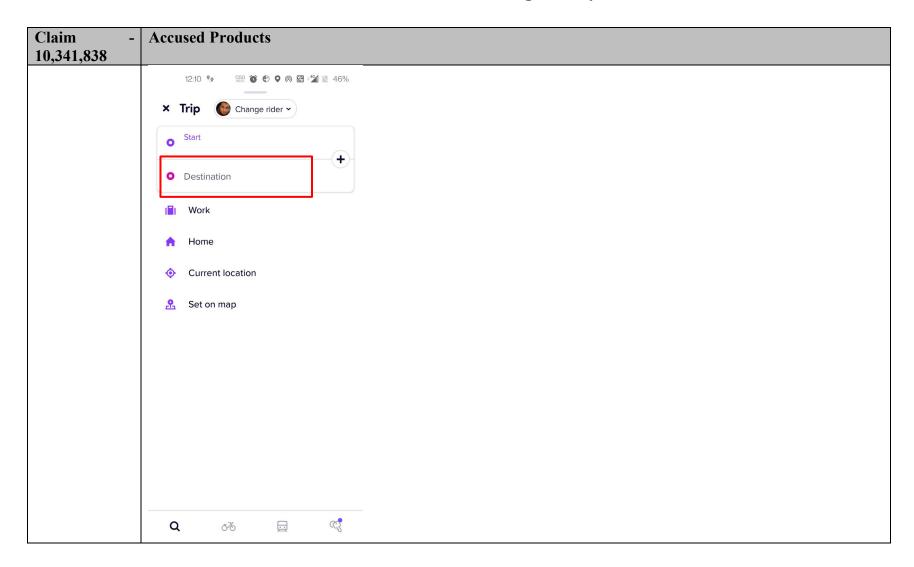


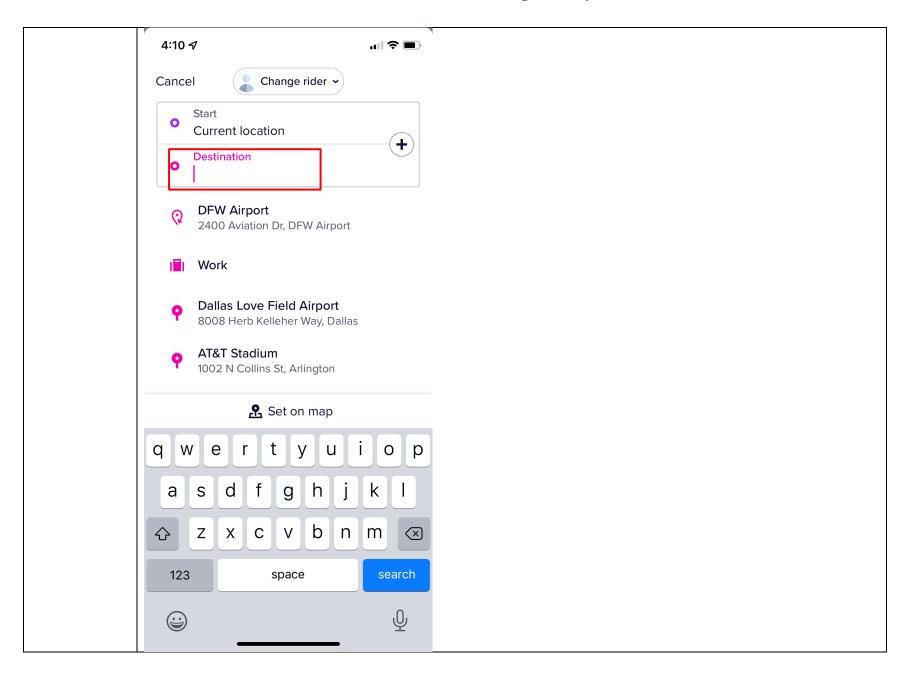


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 611 of 1092

Claim -	Accused Products
10,341,838	
11. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: wherein the new entity of interest is an event and the location of the new entity
wherein the	of interest is a location of the event.
new entity of	
interest is an	
event and the	
location of the	See claim 1[L]. The Lyft server(s) meets this limitation because the rider can schedule a pickup or ride with a
new entity of	location using the Lyft app for riders. The Lyft app can also be used to request a ride from a calendar/schedule
interest is a	which can include the location. For example, the destination address added by the passenger is a location added by
location of the	the passenger before requesting a ride.
event.	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 612 of 1092

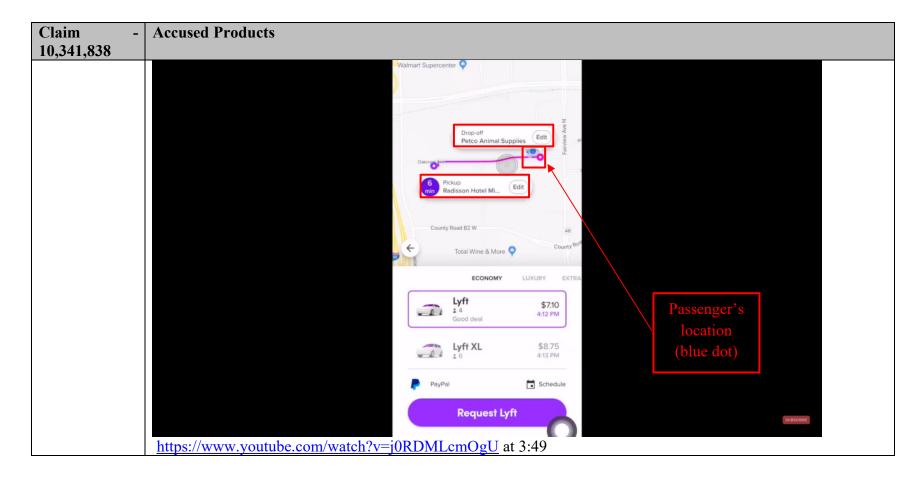


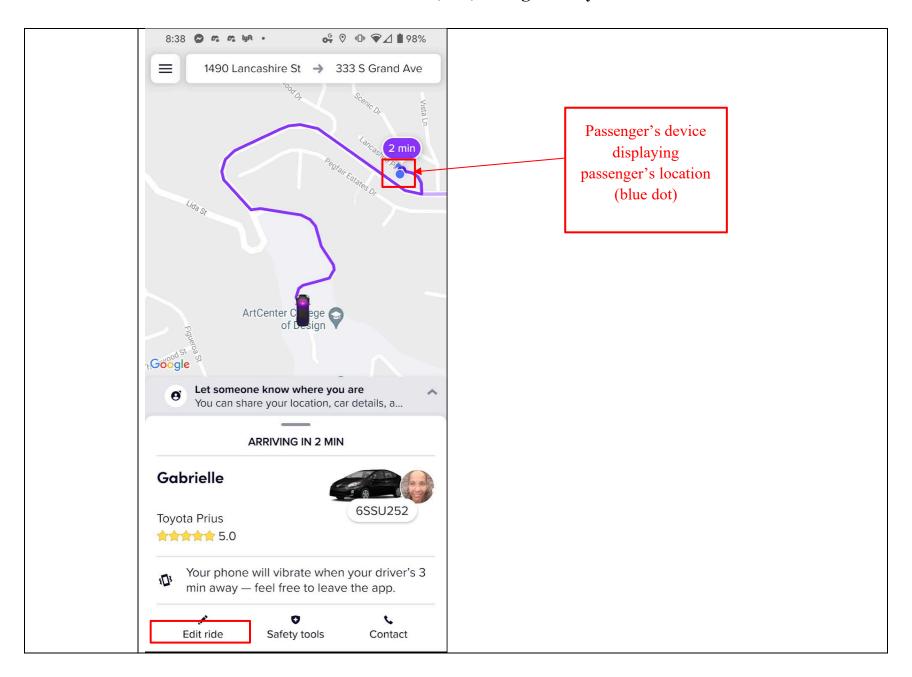


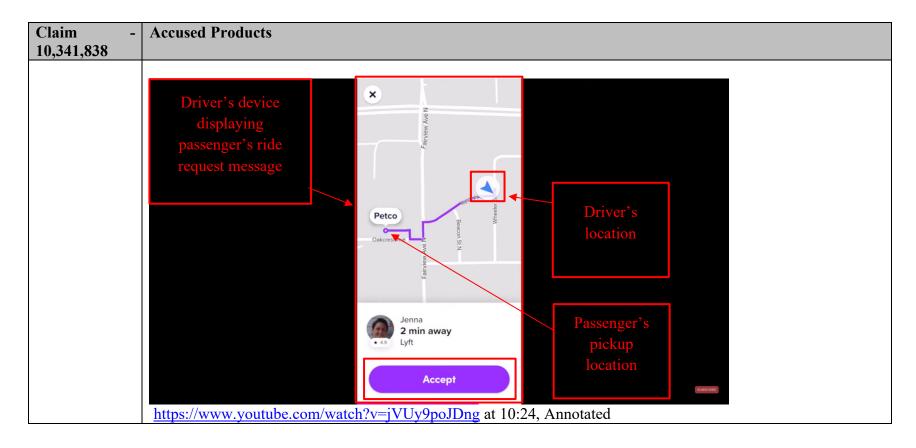
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 614 of 1092

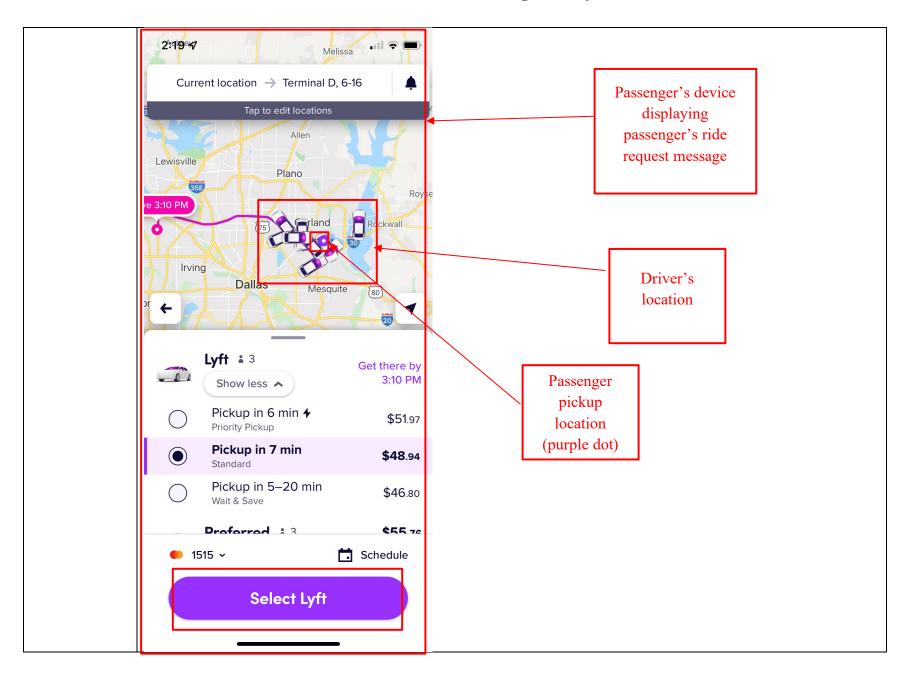
Claim -	Accused Products
10,341,838	
12. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: wherein the new entity of interest location is different from the locations of the
wherein the	first and second mobile devices.
new entity of	
interest	
location is	
different from	See claim 1[L]. The Lyft server(s) meets this limitation because a user can specify a new entity of interest that is
the locations of	not the same location of the rider location or driver location. For example, the user can specify another
the first and	pickup/stop/destination which is different from the rider/driver locations.
second mobile	
devices.	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 615 of 1092

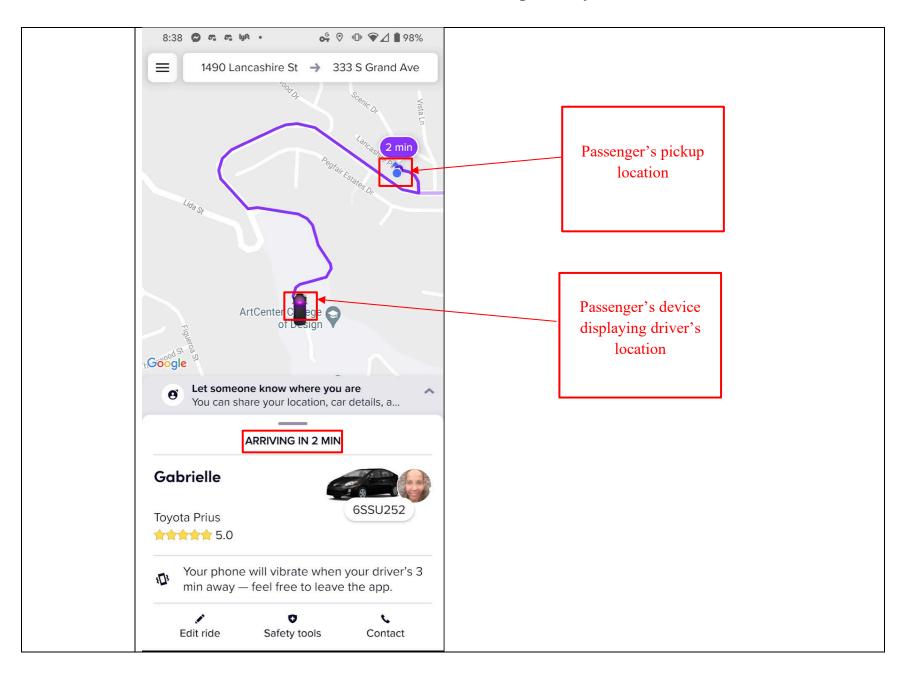








Claim - 10,341,838	Accused Products
13. The method of claim 5, wherein the message comprises at least one of a text message, a photograph, or a video.	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein the message comprises at least one of a text message, a photograph, or a video. See claim 1[K]. The Lyft server(s) meets this limitation because it can communicate at least text messages between riders/drivers via the Lyft apps. The Lyft server(s) also communicate profile photos to/from the apps.
	Driver's device displaying passenger's ride request message Petco Petco Passenger's pickup location Accept
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:24, Annotated



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 621 of 1092

Claim - 10,341,838	Accused Products
14[P]. A	See Claims 1[P] and 1[A] above.
system	
comprising:	
14[A]. one or	See Claims 1[P] and 1[A] above.
more servers	
each having	
one or more	
processors, the	
processors	
configured to	
execute	
instructions to	
perform	
operations	
comprising:	
14[B].	See Claim 1[B] above.
obtaining first	
data provided	
by a first	
mobile device	
corresponding	
to a vehicle, the	
first data	
including a first	
identifier	
14 [C].	See Claim 1[C] above.
permitting the	
first mobile	
device	
corresponding	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 622 of 1092

Claim -	Accused Products
10,341,838	
to the vehicle	
to join a	
communication	
network, the	
permitting	
based on a	
determination	
regarding the	
first data	
14[D].	See Claim 1[D] above.
obtaining	
second data	
provided by a	
second mobile	
device	
corresponding	
to a participant,	
the second data	
including a	
second	
identifier	
associated with	
the participant	
14[E]. allowing	See Claim 1[E] above.
the second	
mobile device	
corresponding	
to the	
participant to	
join the	
communication	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 623 of 1092

Claim - 10,341,838	Accused Products
network, the	
allowing based	
on a	
determination	
regarding the	
second data	
14[F].	See Claim 1[F] above.
receiving	
vehicle	
location data	
provided by the	
first mobile	
device	
corresponding	
to the vehicle,	
wherein the	
vehicle	
location data	
are associated	
with the first	
identifier and	
indicate	
coordinates of	
a geographical	
location of the	
first mobile	
device	0 01 100 1
14[G].	See Claim 1[G] above.
receiving	
participant	
location data	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 624 of 1092

Claim -	Accused Products
10,341,838	
provided by the	
second mobile	
device	
corresponding	
to the	
participant,	
wherein the	
participant	
location data	
are associated	
with the second	
identifier and	
indicate	
coordinates of	
a geographical	
location of the	
second mobile	
device	
14[H]. sending	See Claim 1[H] above.
participant data	
to the second	
mobile device	
corresponding to the	
participant,	
wherein the	
participant data	
comprise the	
vehicle	
location data,	
wherein the	
WHOICHI HIC	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 625 of 1092

Claim -	Accused Products
10,341,838	
second mobile	
device	
corresponding	
to the	
participant is	
configured to	
(1) determine	
coordinates of	
a position on	
the participant	
map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
second mobile	
device, (2)	
display the	
participant	
map, and (3)	
place a first	
symbol on the	
participant map	
at the	
determined	
coordinates of	
the position on	
the participant	
map	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 626 of 1092

Claim -	Accused Products
10,341,838	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
second mobile	
device	
14[I]. sending	See Claim 1[I] above.
vehicle data to	
the first mobile	
device	
corresponding	
to the vehicle,	
wherein the	
vehicle data	
comprise the	
participant	
location data,	
wherein the	
first mobile	
device	
corresponding	
to the vehicle is	
configured to	
(1) determine	
coordinates of	
a position on	
the vehicle map	
corresponding	
to the	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 627 of 1092

Claim - 10,341,838	Accused Products
coordinates of	
the	
geographical	
location of the	
first mobile	
device, (2)	
display the	
vehicle map,	
and (3) place a	
second symbol	
on the vehicle	
map at the	
determined	
coordinates of	
the position on	
the vehicle map	
corresponding	
to the	
coordinates of	
the	
geographical	
location of the	
first mobile	
device	
14[J]. receiving	See Claim 1[J] above.
participant	
selection data	
provided by the	
second mobile	
device	
corresponding	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 628 of 1092

Claim -	Accused Products
10,341,838	
to the	
participant, the	
participant	
selection data	
corresponding	
to user input	
provided via a	
display of the	
second mobile	
device	
14[K]. based	See Claim 1[K] above.
on the	
participant	
selection data,	
performing one	
or more acts	
selected from	
the group	
consisting of:	
sending	
updated	
vehicle data to	
the first mobile	
device	
corresponding	
to the vehicle,	
sending	
updated	
participant data	
to the second	
mobile device	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 629 of 1092

Claim - 10,341,838	Accused Products
corresponding	
to the	
participant, and	
sending a	
message to the	
first mobile	
device	
corresponding	
to the vehicle	
14[L].	See Claim 1[L] above.
receiving	
entity-of-	
interest data	
transmitted by	
the second	
mobile device,	
the entity-of-	
interest data	
comprising	
coordinates of	
a geographical	
location of a	
new entity of	
interest,	
wherein the	
second mobile	
device is	
configured to	
(1) identify	
participant	
interaction	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 630 of 1092

Claim -	Accused Products
10,341,838	
with a display	
of the second	
mobile device,	
the participant	
interaction	
indicating	
selection of a	
position on the	
participant map	
and entry of the	
new entity of	
interest at the	
selected	
position, (2)	
display an	
entity symbol	
representing	
the new entity	
of interest at	
the selected	
position on the	
participant (2)	
map, (3) determine	
coordinates of	
a geographical	
location of the	
new entity of	
interest based	
on coordinates	
of the selected	
of the selected	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 631 of 1092

Claim -	Accused Products
10,341,838	
position on the	
participant	
map, and (4)	
transmit the	
entity-of-	
interest data;	
and	
14[M]. sending	See Claim 1[M] above.
the entity-of-	
interest data to	
the first mobile	
device	
corresponding	
to the vehicle,	
wherein the	
first mobile	
device is	
configured to	
place the entity	
symbol	
representing	
the new entity	
of interest on	
the vehicle map	
at a position on	
the vehicle map	
corresponding	
to the	
geographical	
location of the	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 632 of 1092

Claim -	Accused Products
10,341,838	
new entity of	
interest.	
15. The system	See Claim 2 above.
of claim 14,	
wherein	
performing the	
one or more	
acts comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
participant data	
to the second	
mobile device	
corresponding	
to the	
participant,	
wherein the	
second mobile	
device is	
configured to	
display the	
updated	
participant data	
within the	
participant	
map.	
16. The system	See Claim 3 above.
of claim 15,	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 633 of 1092

Claim -	Accused Products
10,341,838	
wherein the	
updated	
participant data	
comprise	
updated	
vehicle	
location data	
indicating	
coordinates of	
an updated	
geographical	
location of the	
first mobile	
device	
corresponding	
to the vehicle.	
17. The system	See Claim 4 above.
of claim 14,	
wherein	
performing the	
one or more	
acts comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
participant data	
to the second	
mobile device	
corresponding	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 634 of 1092

Claim -	Accused Products
10,341,838	
to the	
participant,	
wherein the	
second mobile	
device is	
configured to	
replace the	
participant map	
with an	
updated	
participant map	
on the display	
of the second	
mobile device	
based at least in	
part on the	
updated	
participant	
data.	
18. The system	See Claim 5 above.
of claim 14,	
wherein	
performing the	
one or more	
acts comprises	
sending, based	
on the	
participant	
selection data,	
the message to	
the first mobile	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 635 of 1092

Claim -	Accused Products
10,341,838 device	
corresponding to the vehicle.	
19. The system	See Claim 6 above.
of claim 18,	
wherein the	
message to the	
first mobile	
device	
corresponding	
to the vehicle	
includes the	
second	
identifier and	
updated	
participant	
location data.	
20. The system	See Claim 7 above.
of claim 14,	
wherein	
performing the	
one or more	
acts comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
vehicle data to	
the first mobile	
device	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 636 of 1092

Claim - 10,341,838	Accused Products
corresponding	
to the vehicle,	
wherein the	
first mobile	
device is	
configured to	
display the	
updated	
vehicle data	
within the	
vehicle map.	
21. The system	See Claim 8 above.
of claim 14,	
wherein	
performing the	
one or more	
acts comprises	
sending, based	
on the	
participant	
selection data,	
the updated	
vehicle data to	
the first mobile	
device	
corresponding	
to the vehicle,	
wherein the	
first mobile	
device is	
configured to	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 637 of 1092

Claim -	Accused Products
10,341,838	
replace the	
vehicle map	
with an	
updated	
vehicle map on	
the display of	
the first mobile	
device based at	
least in part on	
the updated	
vehicle data.	
22. The system	See Claim 9 above
of claim 14,	
wherein the	
vehicle map is	
interactive.	
23. The system	See Claim 10 above.
of claim 14,	
wherein the	
participant map	
is interactive.	
24. The system	See Claim 11 above.
of claim 14,	
wherein the	
new entity of	
interest is an	
event and the	
location of the	
new entity of	
interest is a	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 638 of 1092

Claim -	Accused Products
10,341,838	
location of the	
event.	
25. The system	See Claim 12 above.
of claim 14,	
wherein the	
new entity of	
interest	
location is	
different from	
the locations of	
the first and	
second mobile	
devices.	
26. The system	See Claim 13 above.
of claim 18,	
wherein the	
message	
comprises at	
least one of a	
text message, a	
photograph, or	
a video.	

Based on information presently available,¹ Defendant AGIS Software Development LLC ("AGIS Software") contends that Plaintiff Lyft Technologies Inc. ("Lyft" or "Plaintiff") infringes claims 9, 12-16 (the "Asserted Claims") of U.S. Patent No. 7,630,724 (the "724 Patent") through the Accused Products, Services which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise the Lyft and Lyft Driver applications, servers, and services manufactured, used, or sold by Lyft, Inc. during and after 2016. AGIS Software reserves the right to seek leave of court to amend this list of Accused Products after the filing of an amended complaint or as discovery progresses.

Lyft directly infringes each of the Asserted Claims by making, using, importing, testing, distributing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. Lyft knows, or should have known, that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

B-1

¹ There is no operative complaint asserting non-infringement of any patent claim in this action at this time. AGIS Software reserves the right to update its contentions upon receipt of any future amended complaint.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 640 of 1092

Attachment B for US Patent No. 7,031,724 Against Lyft Accused Products

The following chart identifies specifically where each limitation of each Asserted Claim is found within the Accused Products, and in particular, the corresponding elements that meet the limitations in the Lyft and Lyft Driver applications, services, and services. On information and belief, each charted version of the Lyft Rider and Driver Apps are representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android and iOS operating systems.

AGIS Software does not concede that any claims of the '724 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its accused products. Accordingly, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS Software. Furthermore, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

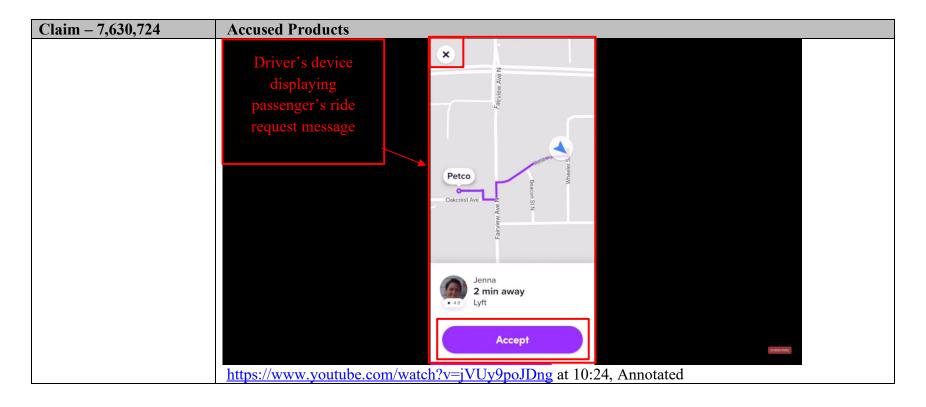
The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

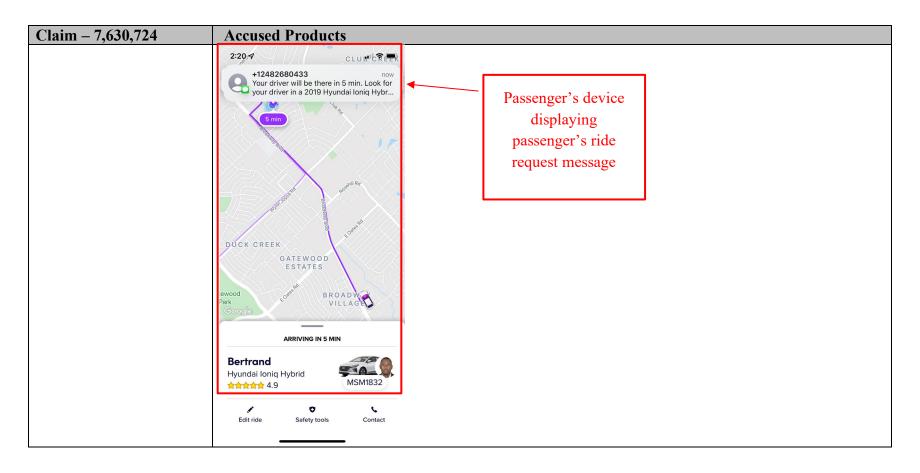
² The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. 205 (E.D. Tex. Oct. 10, 2018); *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. 147 (E.D. Tex. Dec. 8, 2020); *AGIS Software Dev. LLC v. T-Mobile USA, Inc., et al.*, No. 2:21-cv-00072-JRG, Dkt. 213 (E.D. Tex. Nov. 10, 2021). AGIS Software reserves the right to update its constructions and contentions in view of this Court's claim construction order.

Claim - 7,630,724	Accused Products
9[P]. A method for providing a cellular phone communication network for designated participating users, each user having a similarly equipped cellular phone that includes a CPU, GPS	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method for providing a cellular phone communication network for designated participating users, each user having a similarly equipped cellular phone that includes a CPU, GPS navigational system, an interact message transmitter and receiver and a touch screen display.
navigational system, an interact message transmitter and receiver and a touch screen display comprising:	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. Each of the driver and the passenger's mobile phones which are installed with the Lyft and Lyft driver apps comprises a CPU, GPS, a navigational system symbol generator (Lyft App and Lyft Driver App) and a touch screen display. The Lyft and Lyft Driver application is supported by smart devices including but not limited to smartphones and tablets, which have an antenna in them for both transmission and reception. Lyft Driver app and the other exclusively for drivers (named the Lyft Driver app). The Lyft Driver app will executed by a table of the drivers and solving the laft into drivers and the laft app drivers and solving the laft by the standard for all drivers and solving At this time drivers and the laft app drivers and solving and the laft by the laft app.
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.

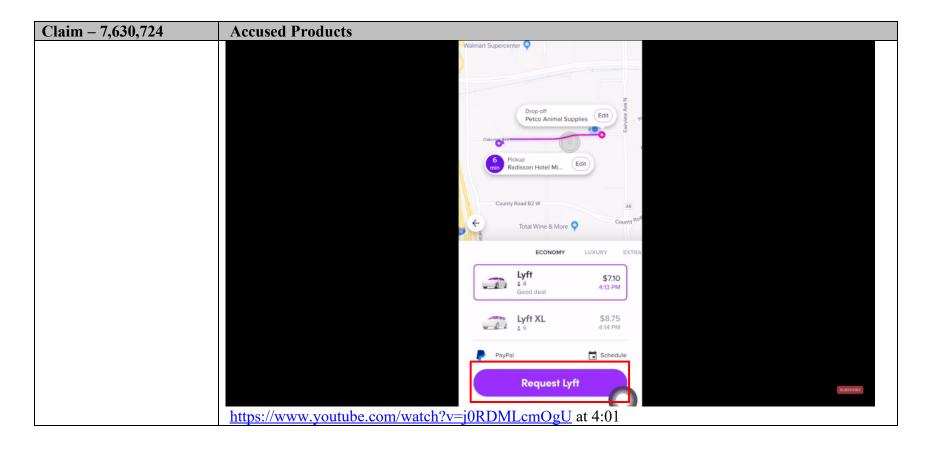
Claim – 7,630,724	Accused Products
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	2:30 PM Calcac of the site Artis' fleetre The same of the site
	Go online
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 643 of 1092

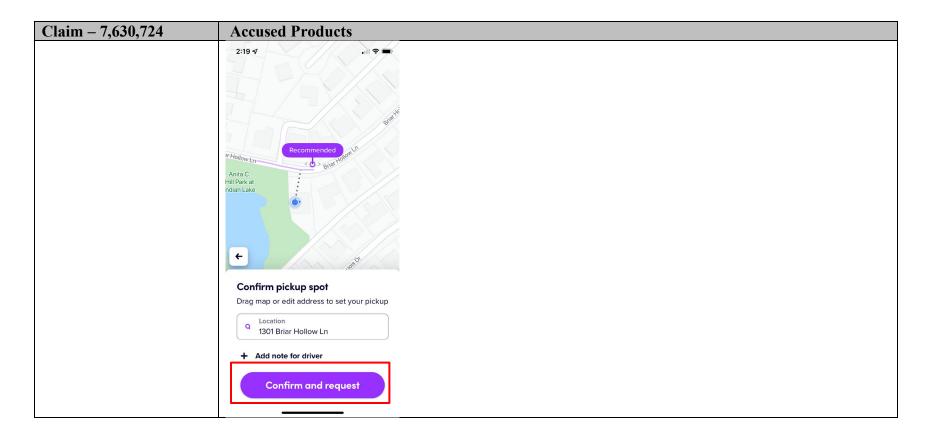




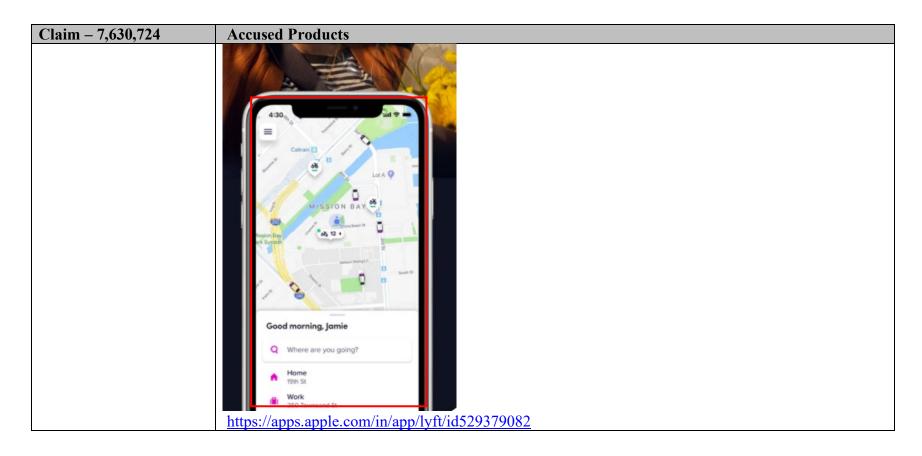
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 645 of 1092



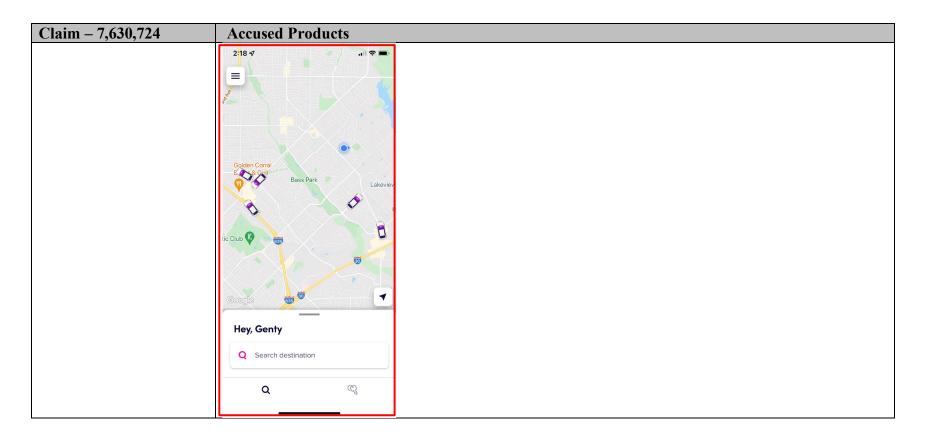
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 646 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 647 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 648 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 649 of 1092

Claim - 7,630,724	Accused Products			
	Combining multiple components into a single chip saves on space, cost, and power consumption.			
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating			
	system to detecting when you press the power off button. SoCs connect to other components too,			
	such as cameras, a display, RAM, flash storage, and much more.			
	The list below contains the most common components that you will find inside a smartphone System-on-a-Chip. We're going to cover a few of the most important ones later on in this article.			
	· Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the Android OS and most of your apps.			
	 Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an app's user interface and 2D/3D gaming. 			
	 Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files. 			
	 Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a CPU. Includes decompressing music files and analyzing gyroscope sensor data. 			
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine			
	learning (AI) tasks. These include voice recognition and camera processing.			
	 Video encoder/decoder — Handles the power-efficient conversion of video files and formats. 			
	 Modems — Converts wireless signals into data your phone understands. Components include 4G LTE, 5G, WiFi, and Bluetooth modems. 			
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/			

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 650 of 1092

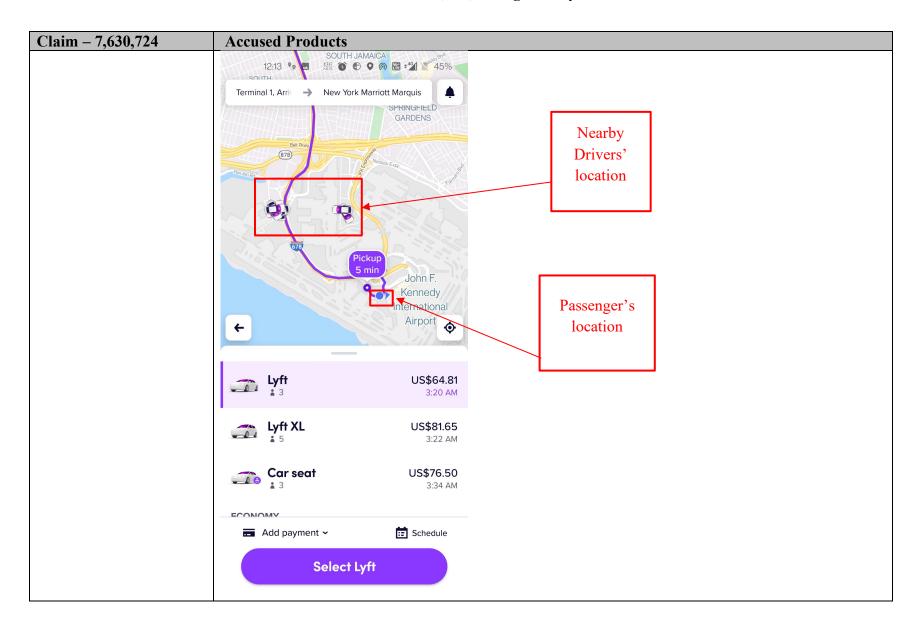
Claim - 7,630,724	Accused Products	
	You must have seen that every Android and iOS device in today's age comes with	
	GPS right inside it. This is one feature that will be there in every smartphone no	
	matter what the price of that device might be. And that is because of the fact that	
	GPS is the most basic yet most useful feature on every smartphone.	
	Just for information, the GPS stands for Global Positioning System and it provides	
	accurate geolocation and time information for every equipment that is equipped	
	with a GPS receiver. Now, the best example of using GPS is with services such as	
	Google Maps, Apple Maps, and others where you can see where exactly you are right	
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS	
	satellite.	
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device	

Claim - 7,630,724	Accused Products		
	Mobile phone contents		
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone: • Radio frequency - receiver and transmitter		
	Digital signal processing		
	Analogue / digital conversion		
	Control processor		
	SIM or USIM card		
	Power control and battery		
	https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php		
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.		
9[A] accessing a database in each cell phone that includes a geographical map of a predetermined	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a database in each cell phone that includes a geographical map of a predetermined area for user viewing on the touch screen display.		
area for user viewing on the touch screen display;			

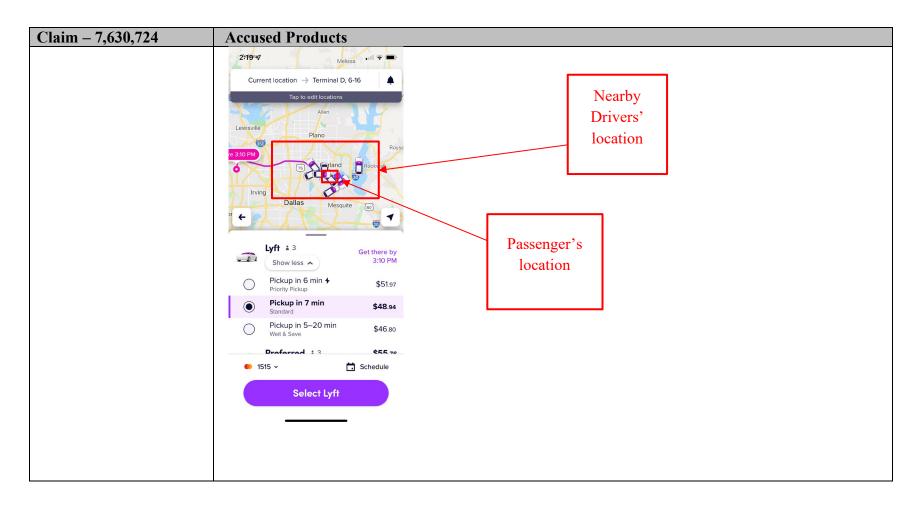
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 652 of 1092

Claim - 7,630,724	Accused Products
	For example, in the Lyft app for passengers, the passenger will receive a geographical location on the map on the display of their mobile phone. The geographical map is accessed through the database of the Lyft app. Through this geographical map, the passenger is able to make a ride request to a particular location and see the location of different nearby drivers before making the request and viewing the location of the driver after a driver accepts the passenger's ride request.
	For example, in the Lyft driver app, the driver will receive a geographical map of their location, which is accessed through the database of the Lyft driver application. Through this app, the driver is able to see the location of the rider, when the ride request message of the passenger is broadcasted with the passenger's pickup location (provided pickup location is set to the current location by the passenger).

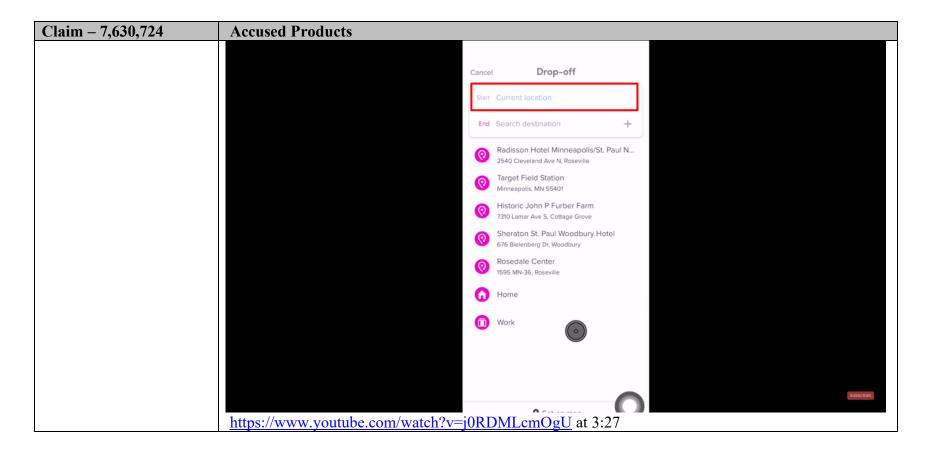
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 653 of 1092



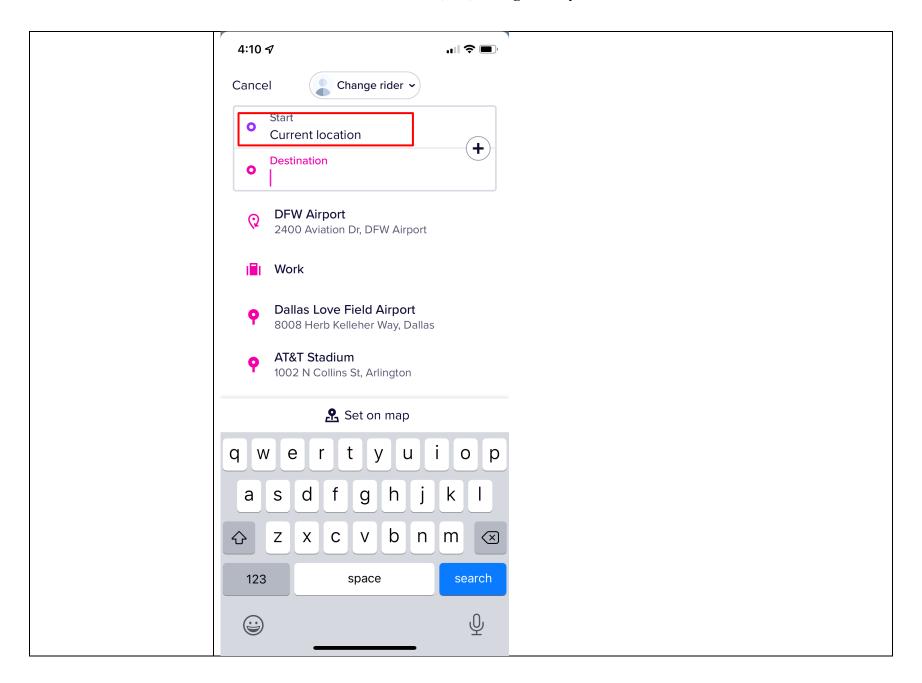
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 654 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 655 of 1092



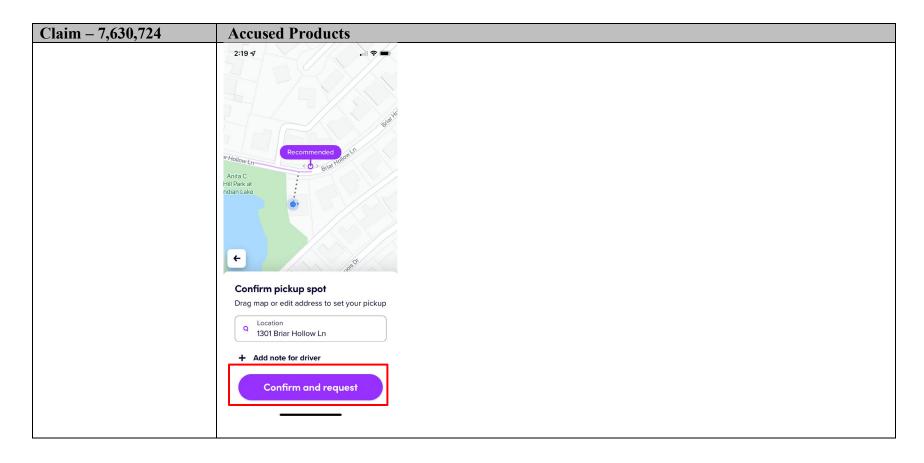
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 656 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 657 of 1092

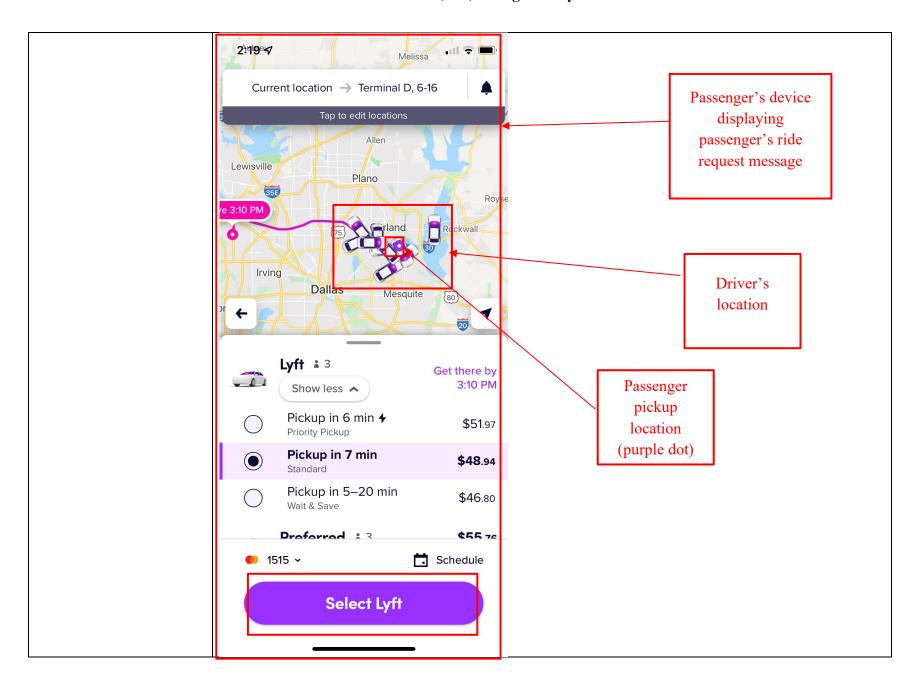


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 658 of 1092



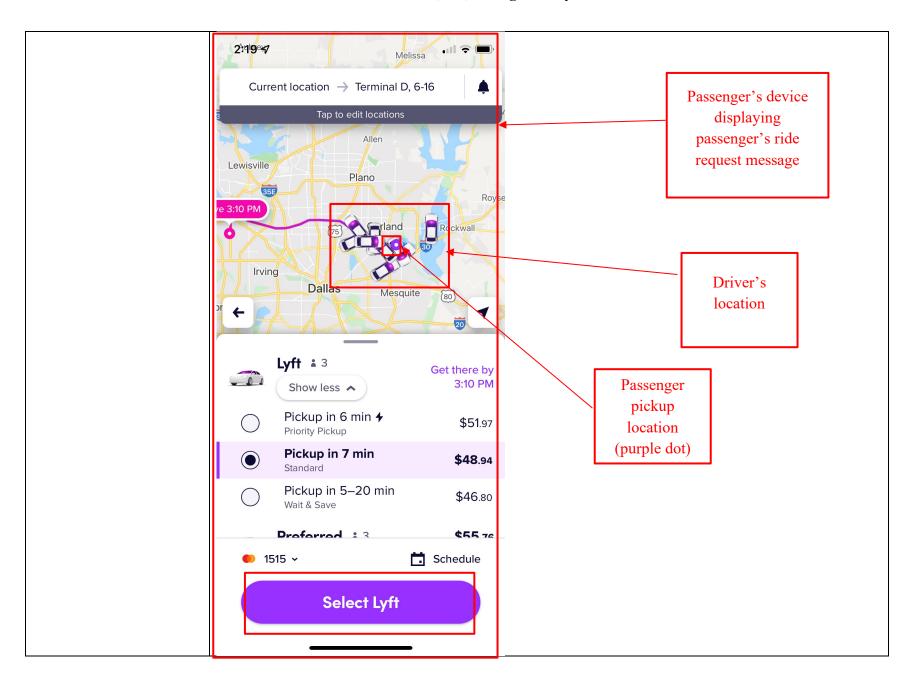
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 659 of 1092



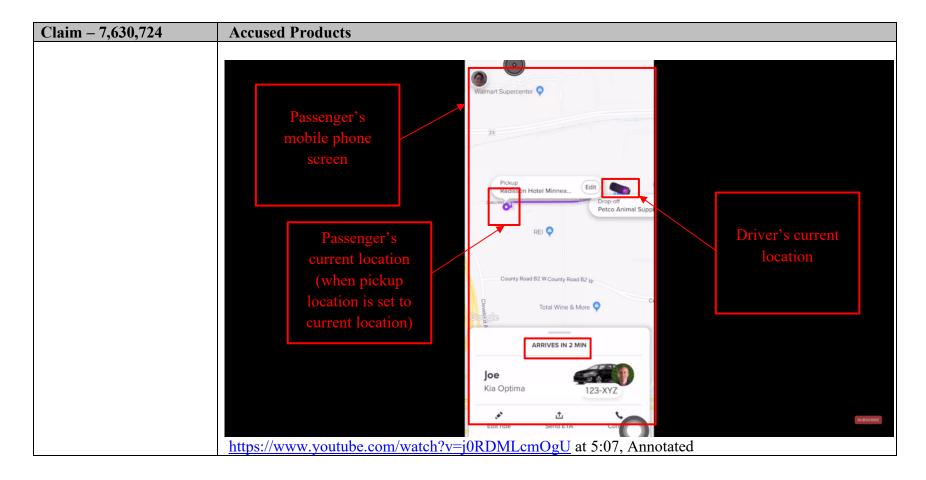


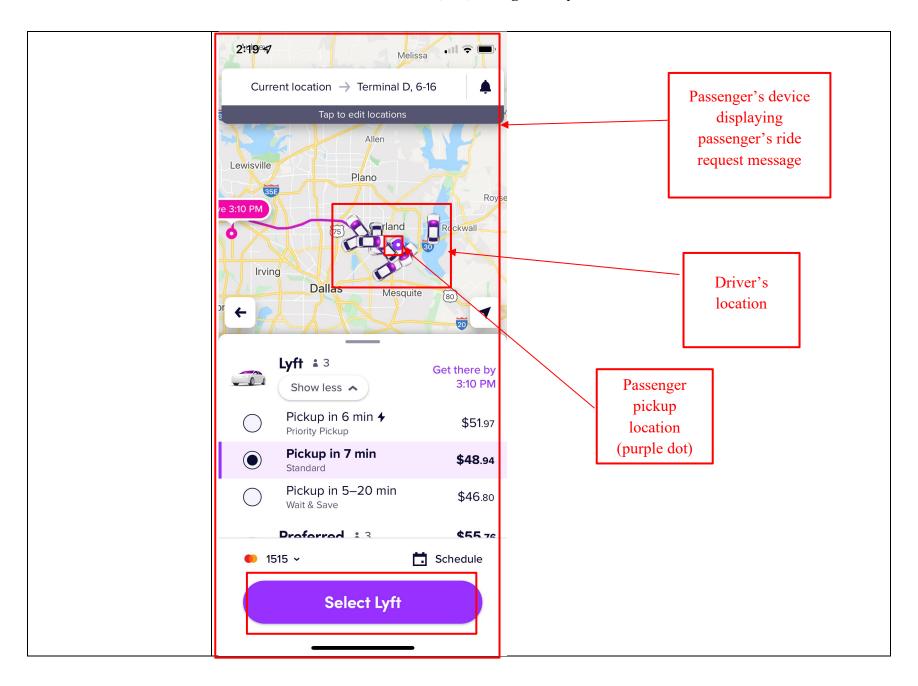
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 661 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 663 of 1092

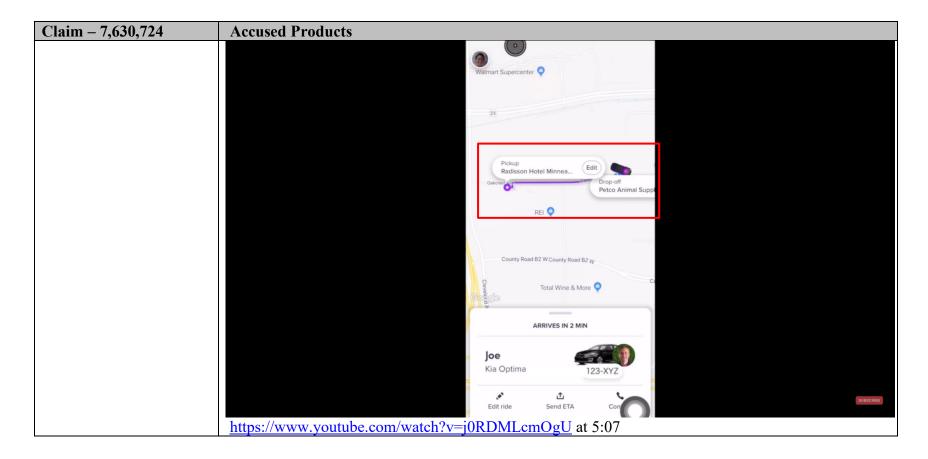




Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 665 of 1092

Claim - 7,630,724	Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
each cell phone for	The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing an application program in each cell phone for generating one or more symbols representative of one or more participating users, each of whom have a similarly equipped cellular phone.
a similarly equipped cellular phone;	For example, Lyft app displays symbols on the screen representing the passenger as well as the driver's vehicle.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 666 of 1092

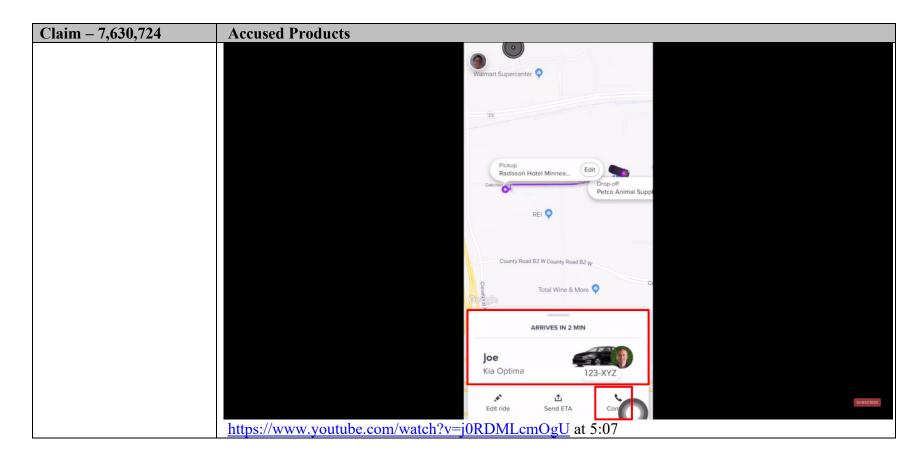


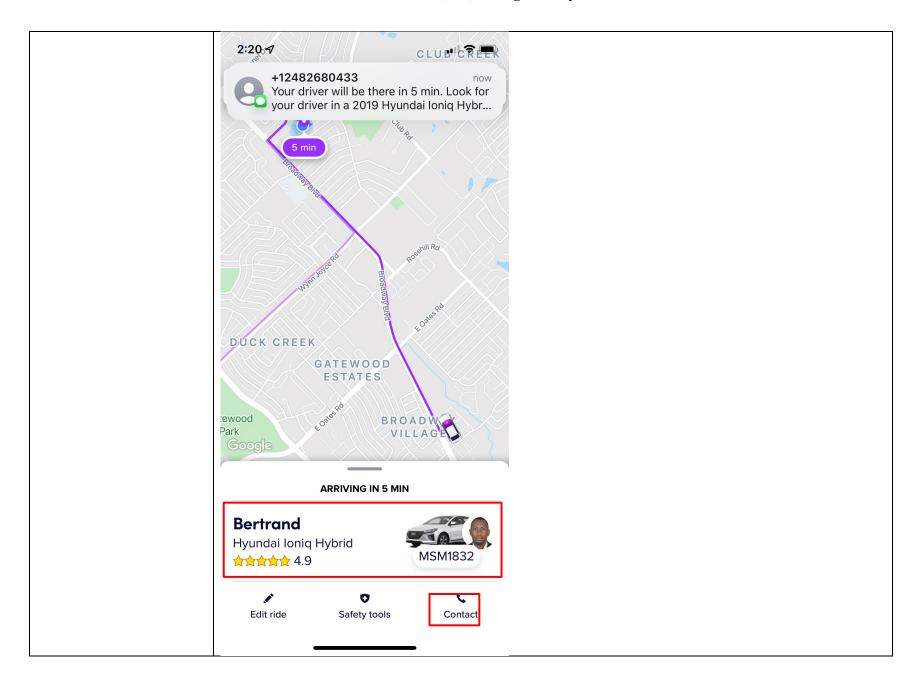


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 668 of 1092

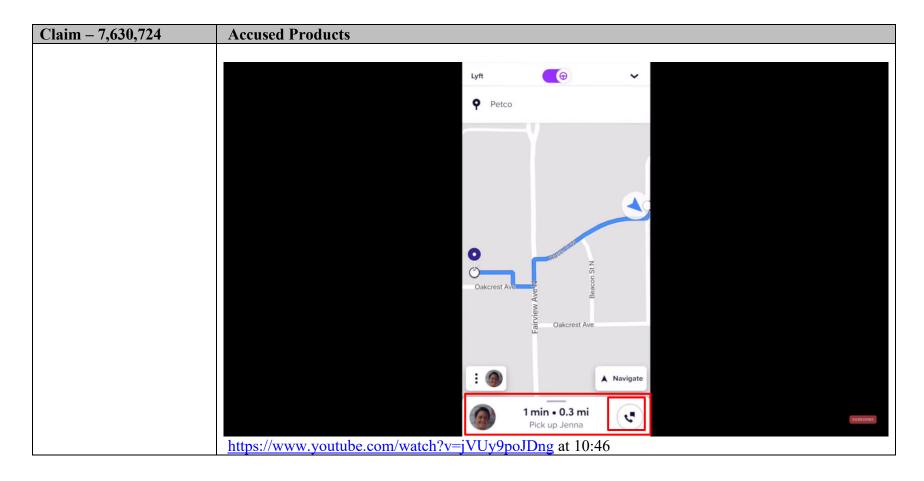
Claim - 7,630,724	Accused Products		
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.		
9[C]. accessing a database in each cell phone that includes cellular telephone numbers of each of the participating users having similarly equipped cellular phones, said database	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a database in each cell phone that includes cellular telephone numbers of each of the participating users having similarly equipped cellular phones, said database including the generation of one or more symbols associated with a particular participating user.		
including the generation of one or more symbols associated with a particular participating user;	The Lyft apps meet this limitation because they access the virtual telephone numbers or the unique identifiers which are equivalent to phone numbers of the riders/drivers of the Lyft platform/network. The virtual phone numbers are received and kept on one or more databases either locally or remotely on a Lyft server(s) for access by the Lyft apps. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon ("rapid voice initiation and communication") on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.		

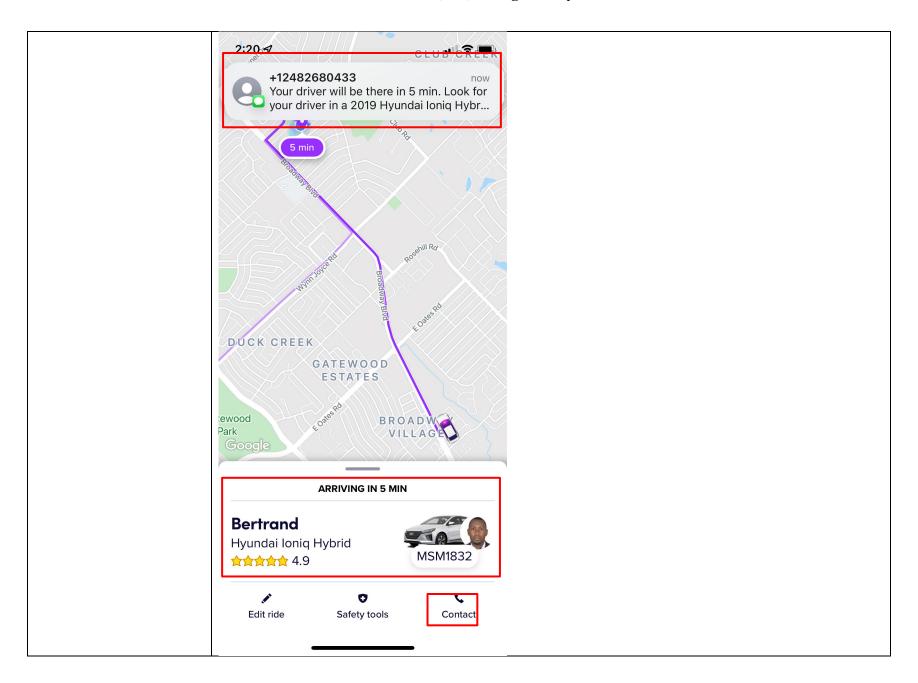
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 669 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 671 of 1092

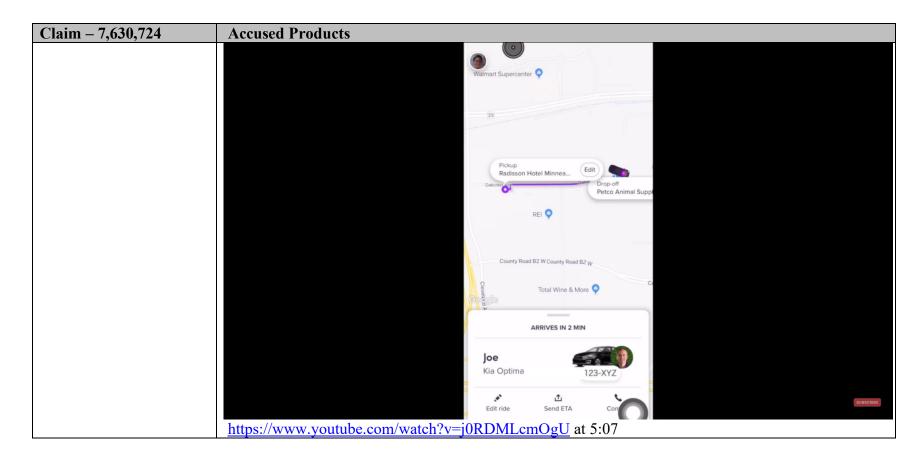


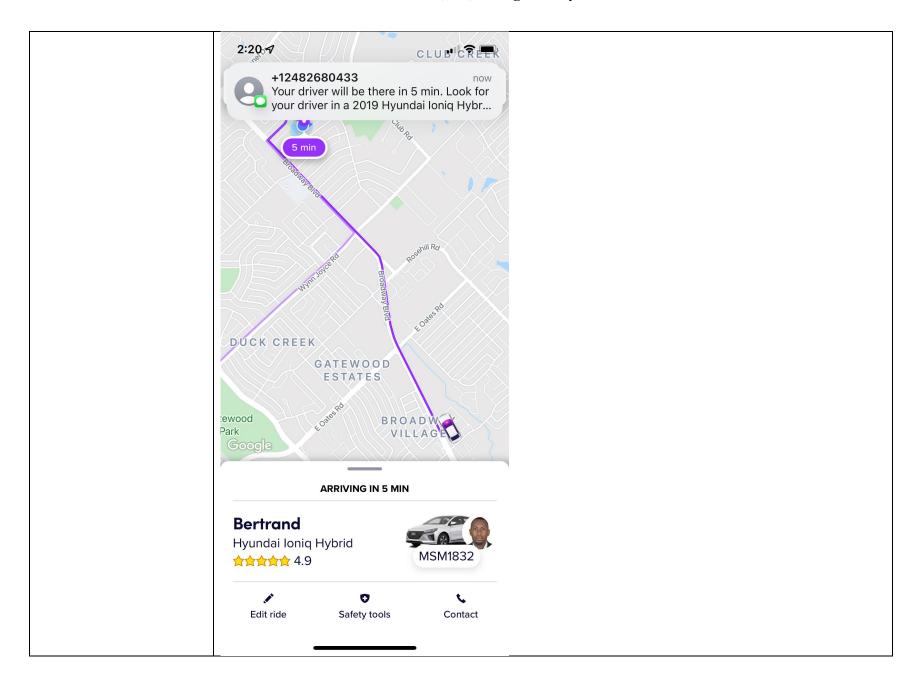


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 673 of 1092

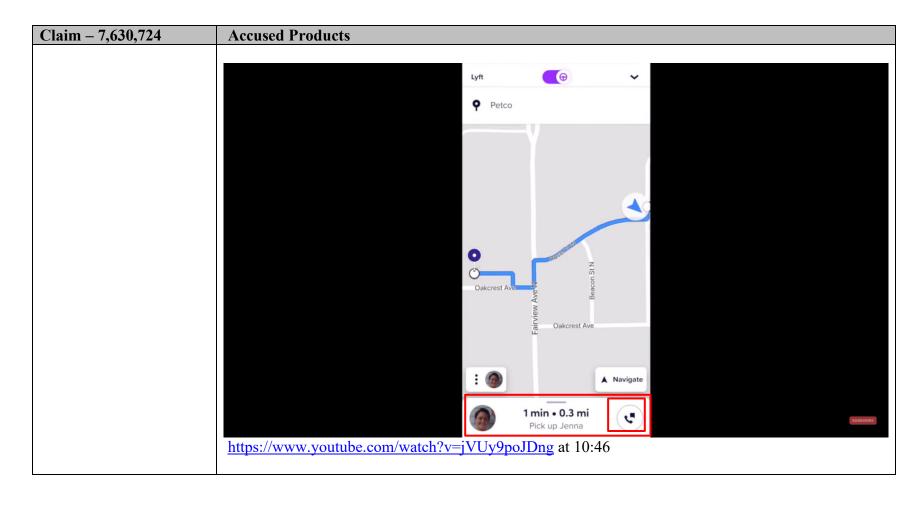
Claim - 7,630,724	Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
	With respect to the limitations reciting the cellular phone number(s) or telephone number(s), the claim is met either literally or under the doctrine of equivalents.
9[D]. calling a	See claim 9[C].
participating user by touching the symbol on the map display and touching a call switch;	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: calling a participating user by touching the symbol on the map display and touching a call switch.
	The Lyft apps meet this limitation because provide selectable interface elements on the Lyft application for calling drivers/riders. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon ("rapid voice initiation and communication") on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.

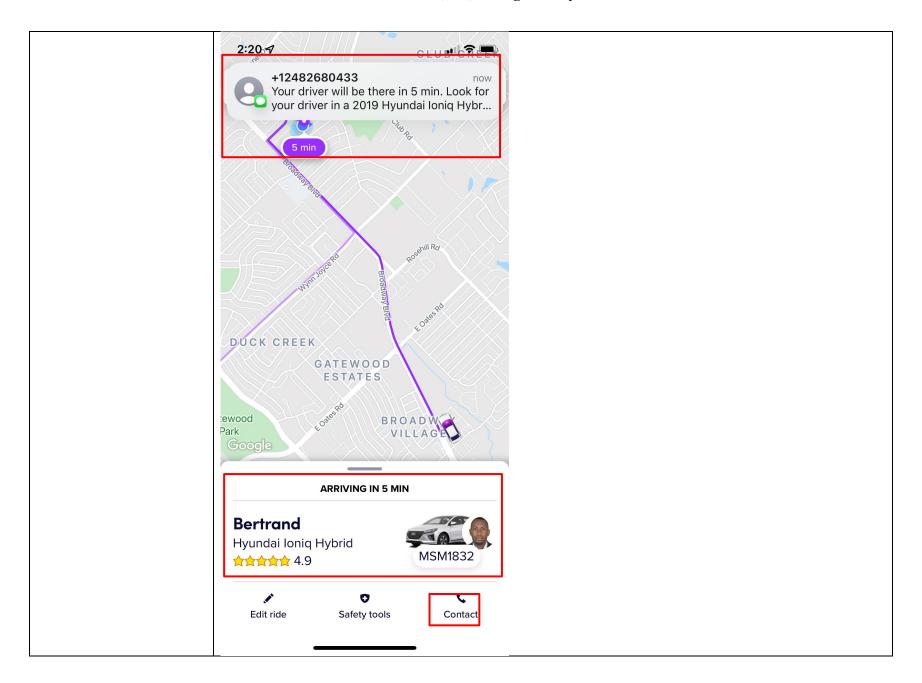
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 674 of 1092



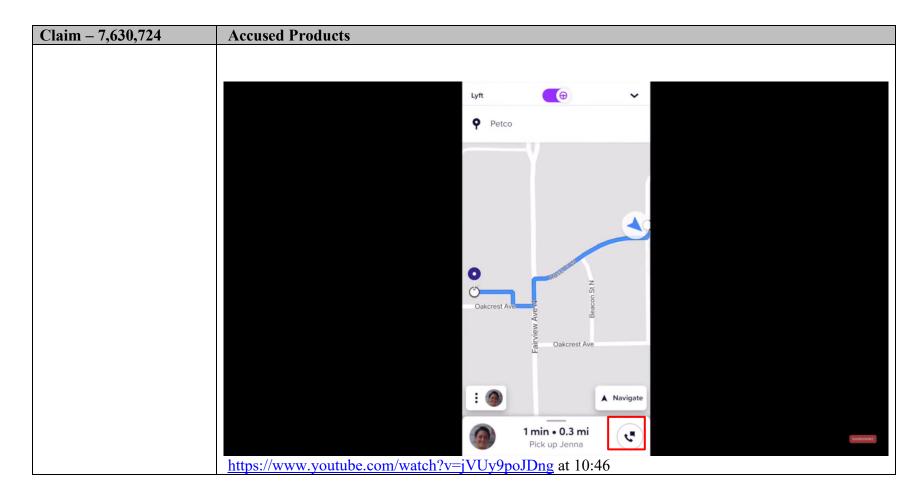


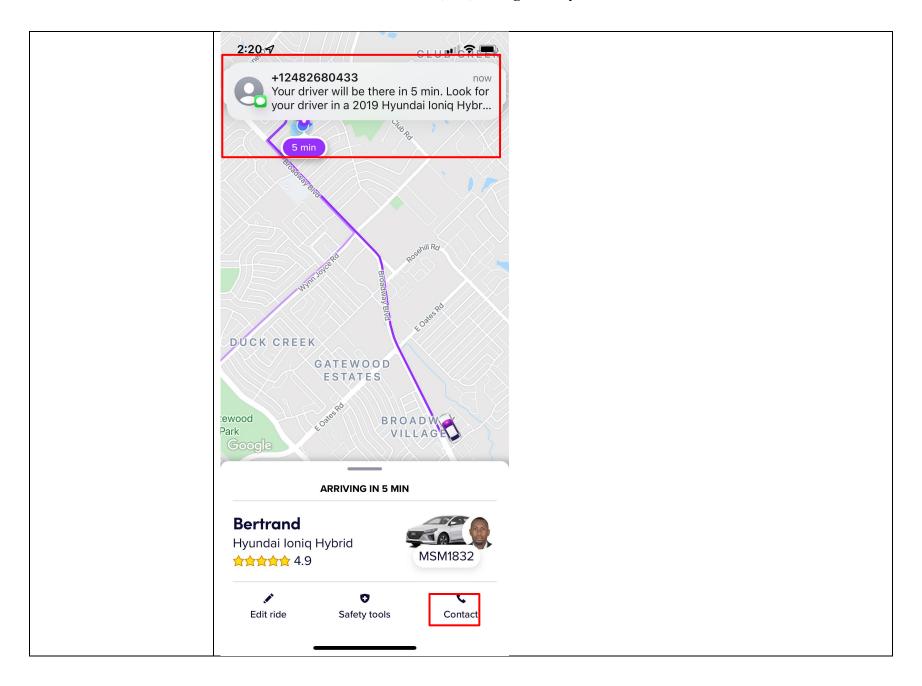
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 676 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 678 of 1092

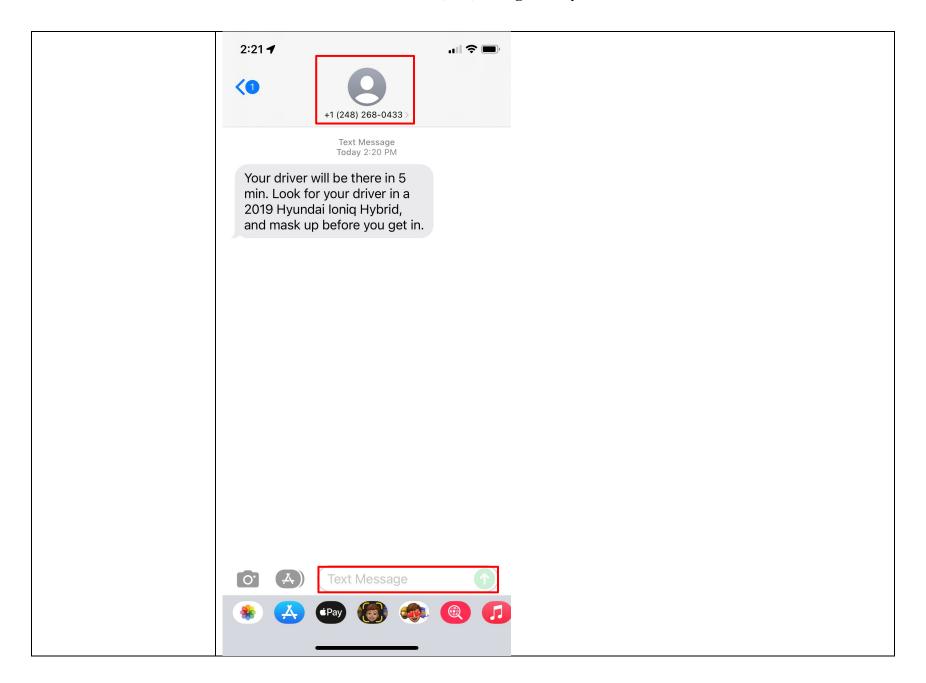


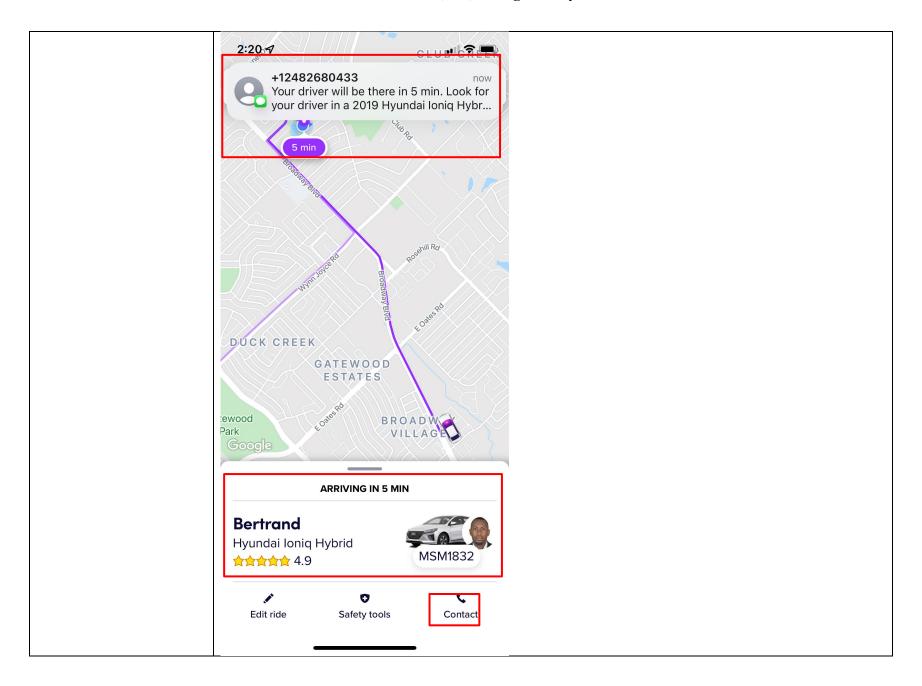


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 680 of 1092

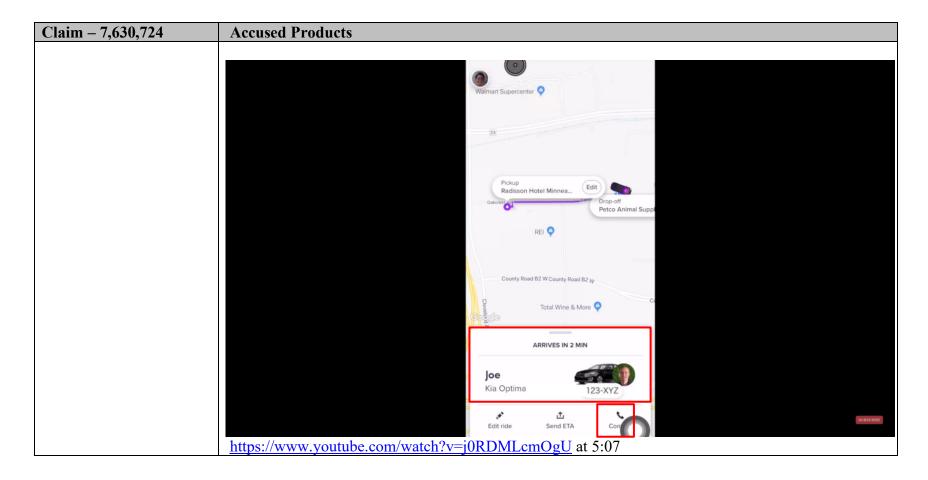
Claim - 7,630,724	Accused Products	
	X Contact Jenna	
	I'm your driver, Joe >	
	Hi, where are you?	
	Be there in 1 min >	
	Stuck in traffic >	
	Can't take a call now, sorry >	
	I'm in a black Kia Optima Hybrid >	
	Gate code, please? >	
		SURSCHIE
	https://www.youtube.com/watch?v=jVUy9poJDng at 11:21	

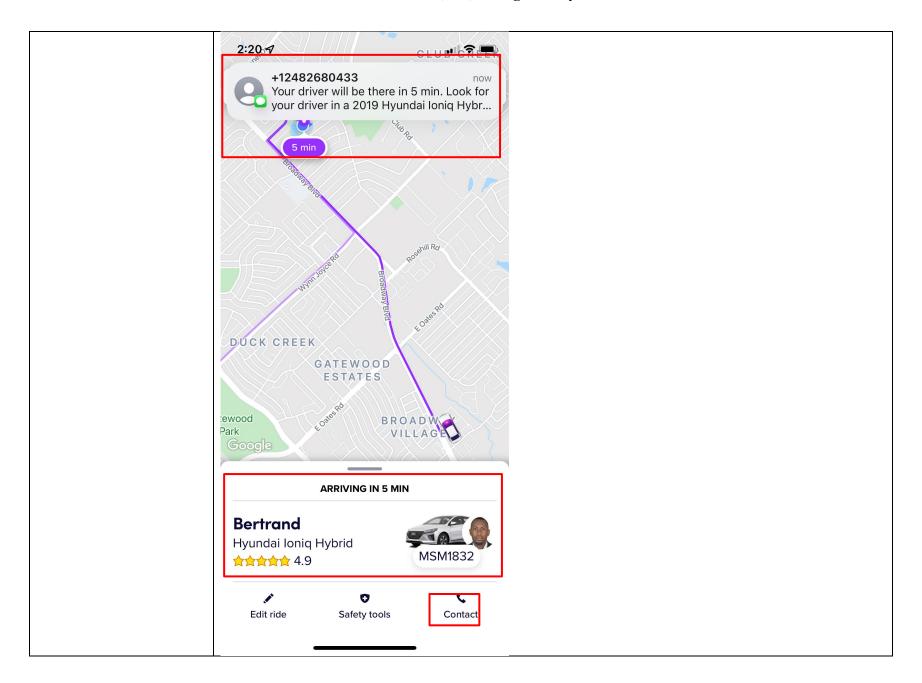
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 681 of 1092



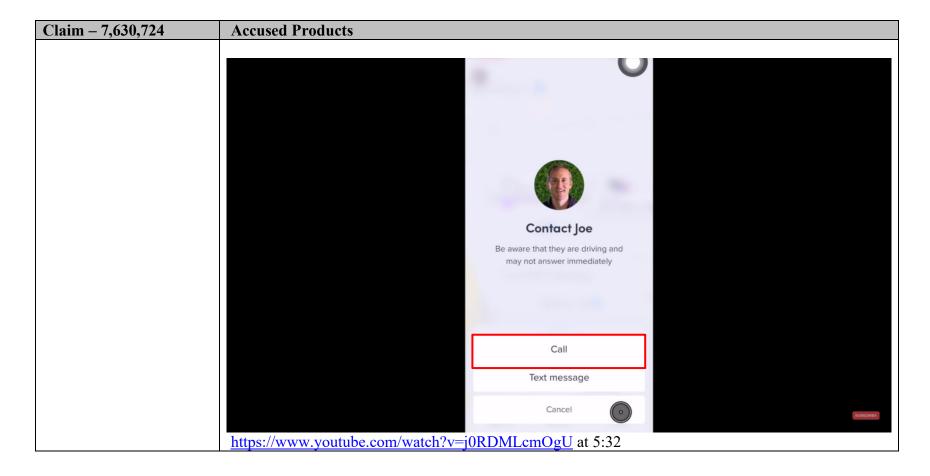


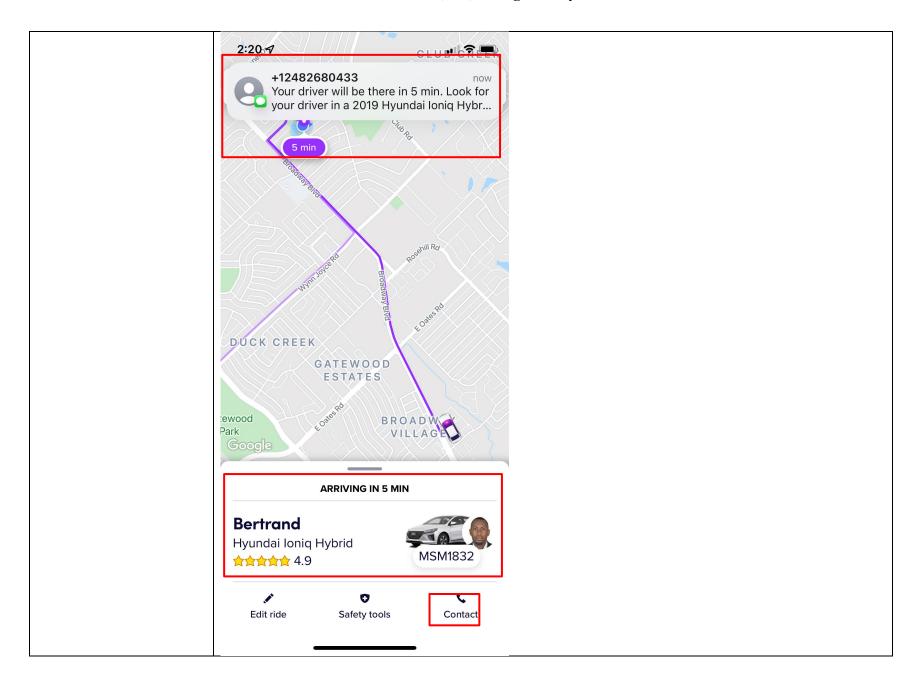
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 683 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 685 of 1092



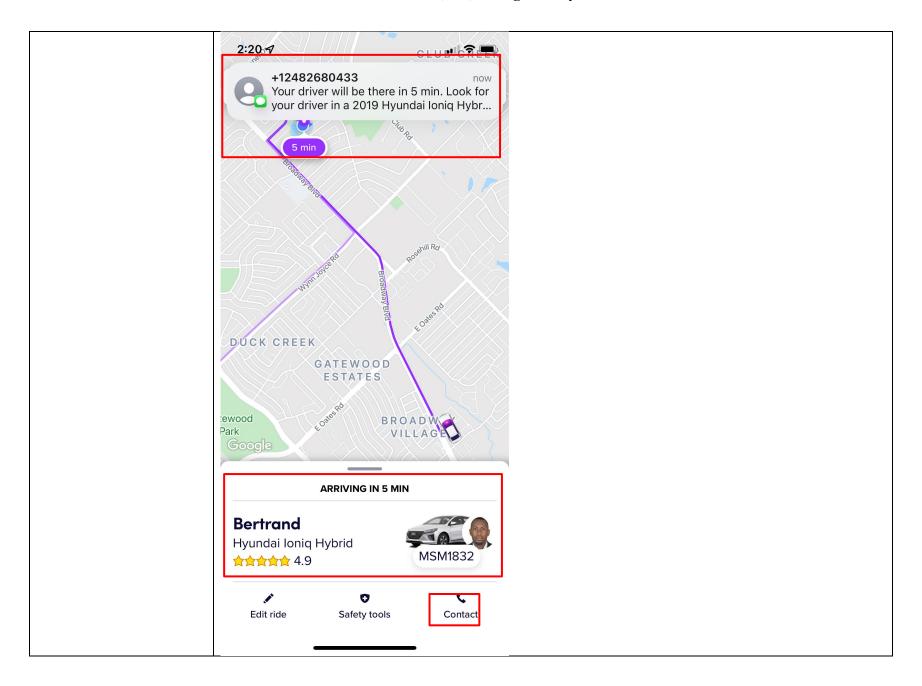


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 687 of 1092

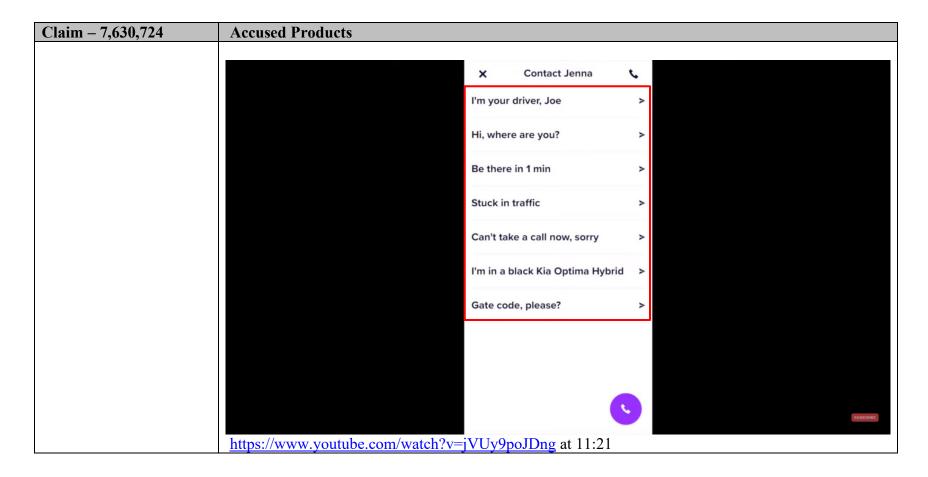
Claim - 7,630,724	Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
OFFI connecting each of	The Light Approach Products infringes directly and/or indirectly by performing indusing others to
9[E]. connecting each of the cell phones to an internet connection;	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: connecting each of the cell phones to an internet connection.
	For example, when passengers and drivers access the Lyft and Lyft driver apps respectivelywhich are connected to an IP based connection for them to use the Lyft platform (Lyft and Lyft Driver app).

Claim - 7,630,724	Accused Products
	Mobile data settings
	The app must receive data through your mobile network to work. The app will become unresponsive if this setting is turned off. Here are some resources:
	iOS:
	Head to Apple Support to learn how to check your cellular data usage.
	Android:
	To update the mobile data settings:
	1. Tap 'Settings' on your phone's menu
	2. Tap 'Applications'
	3. Select the app on the list
	4. Select 'Mobile Data'
	5. Tap 'Restrict Background Data'
	6. Make sure it isn't toggled to 'Always' https://help.lyft.com/hc/e/articles/115013080508-Phone-software-recommendations-and-settings
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
9[F]. exchanging IP addresses using SMS or other digital message	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: exchanging IP addresses using SMS or other digital message format between and among each of the network participant users so that communications between
format between and	Termine comments and among each of the new on participant about to make communications between

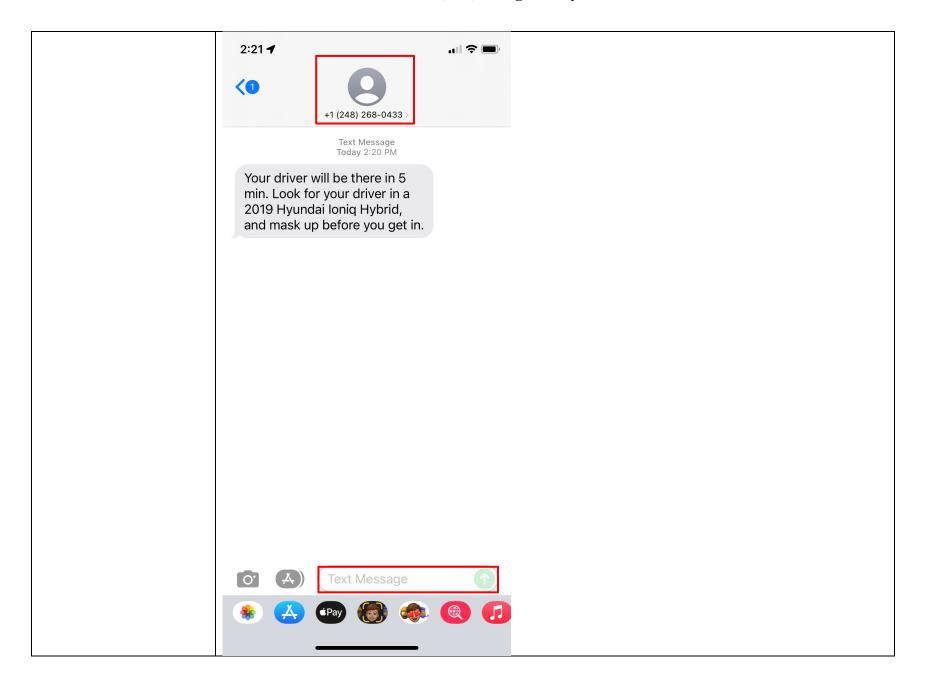
Claim - 7,630,724	Accused Products
among each of the	participants is established via IP or transmission of a network participant's IP address to a server which
network participant users	then transmits data to other network participants using the IP address previously.
so that communications	
between participants is established via IP or	
transmission of a network	The Lyft apps meet this limitation because the Lyft apps transmit data (including their IP addresses) to
participant's IP address to	the Lyft server(s) which then communicates data to the other rider/driver. Alternatively, the Lyft apps
a server which then	communicate IP addresses via the Lyft server(s) while communicating data between riders/drivers.
transmits data to other	
network participants using	Lyft 🔾 🔾
the IP address previously.	♀ Petco
	Z Z
	Oakcrest Ave
	riew A
	Oakcrest Ave
	♣ Navigate
	1 min • 0.3 mi Pick up Jenna
	https://www.youtube.com/watch?v=jVUy9poJDng at 10:46

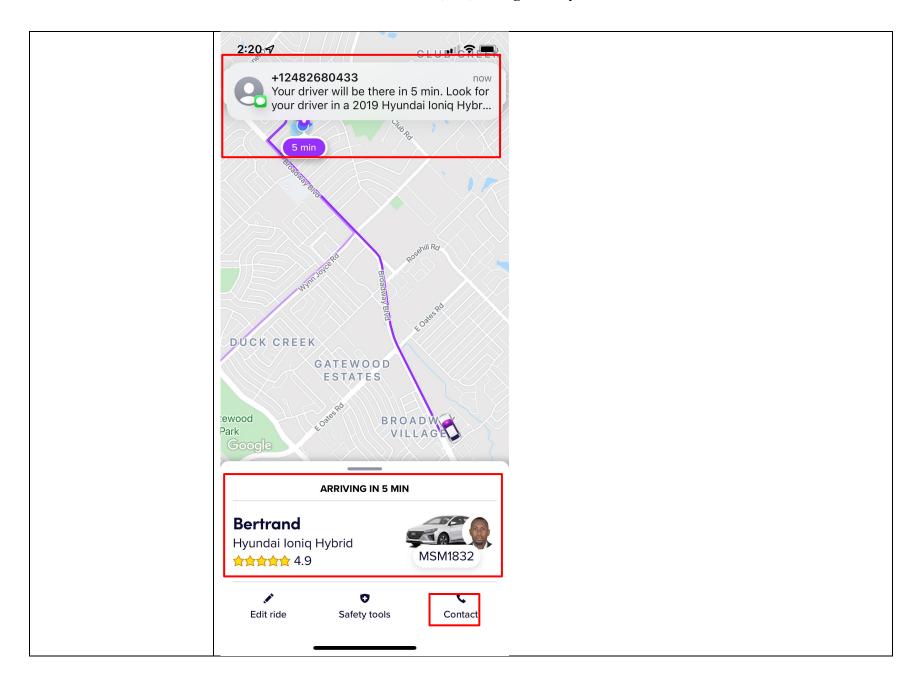


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 691 of 1092

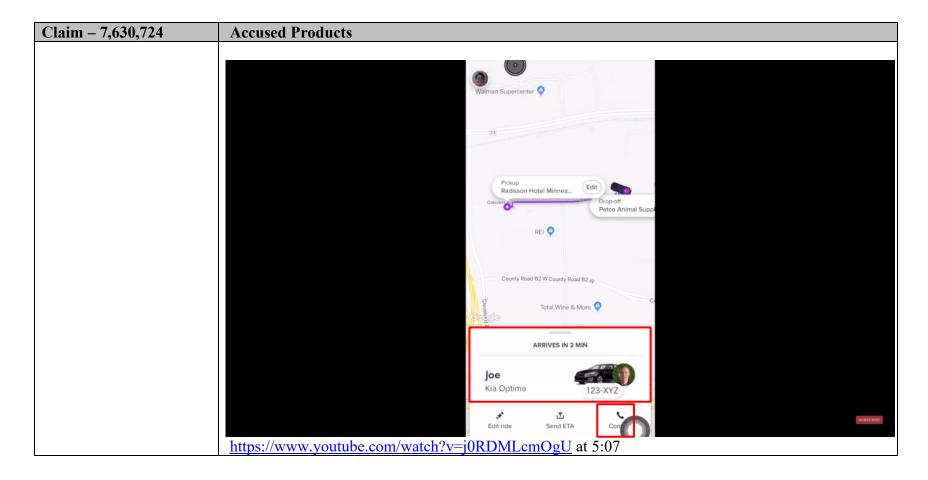


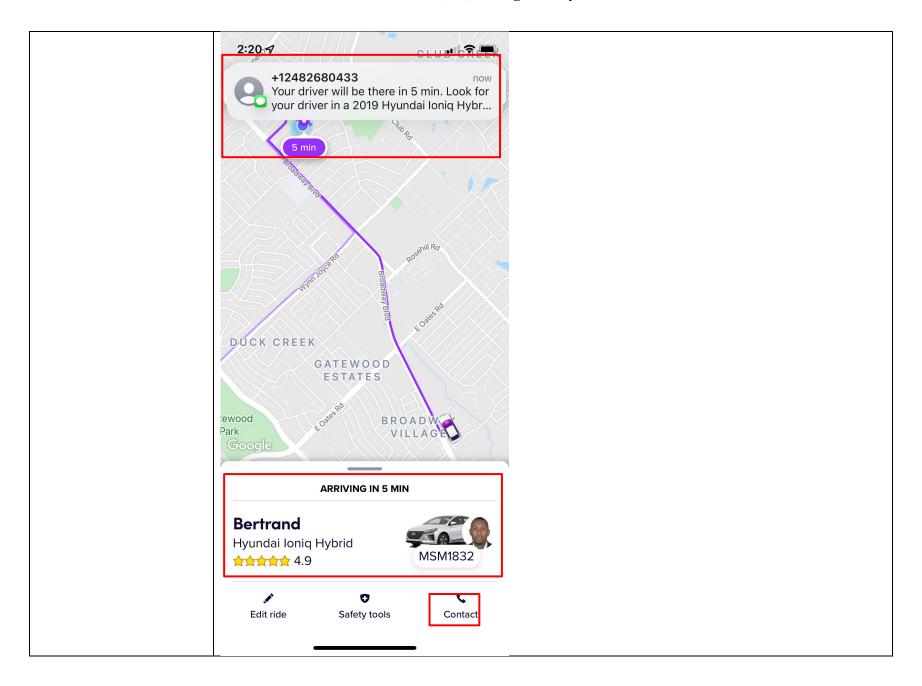
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 692 of 1092



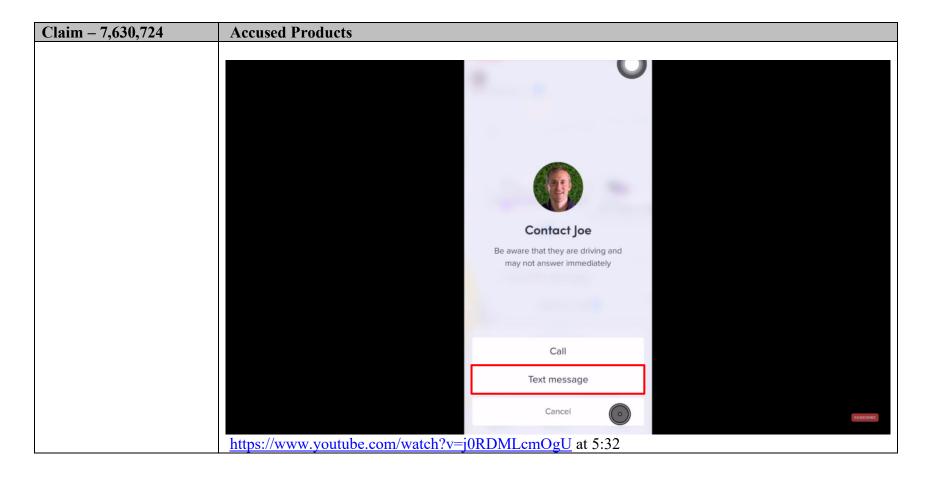


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 694 of 1092

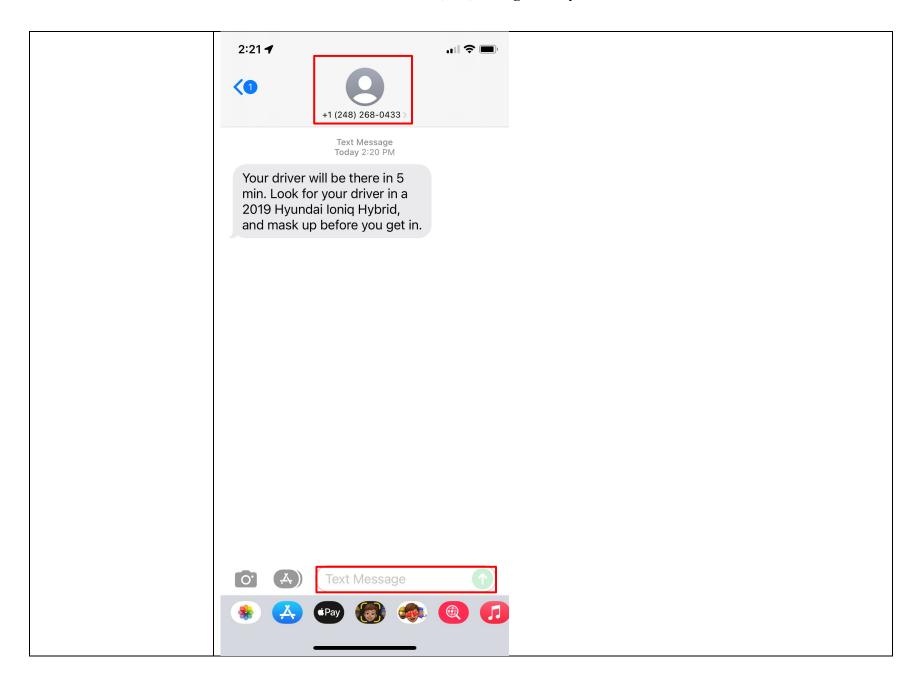




Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 696 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 697 of 1092



Claim - 7,630,724	Accused Products
	Network addressing
	When a 'message' such as a file, image or video is transmitted across a network, it is first broken down into small blocks called <i>segments</i> . These are placed into containers called <i>packets</i> , typically by the Internet Protocol (IP). There are two versions of IP: version 4 and version 6.
	IP is responsible for delivering the packets from source to destination, and regardless of the version being used packets must use some form of addressing to uniquely identify the message source and message destination.
	https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=129584&printable=1
12. A method for providing a cellular phone communication network as in claim 9 including the additional steps of: adding a new cell phone	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: adding a new cell phone participant into a communication network of participating users by having the new cell phone participant transmit an identifier, a cell phone number and an IP address in an initial message to other participant users or to a server for retransmission of the data other network participants.
participant into a communication network of participating users by having the new cell phone	Lyft meets this limitation because riders/drivers add their account/identity information which includes their cell phone number. Additionally, when using the Lyft app, IP based communication to the Lyft server(s) includes IP addresses.
participant transmit an identifier, a cell phone number and an IP address in an initial message to other participant users or	For example, Lyft's servers provide shared rides where multiple passengers can share a ride using the Lyft app. Through this app, Lyft's servers add new passengers into the network in which a driver and a passenger may already be present. This new passenger has a cell phone number and IP address associated with their account which is used to match the new passenger with the already existing driver and passenger.
to a server for retransmission of the data other network participants.	

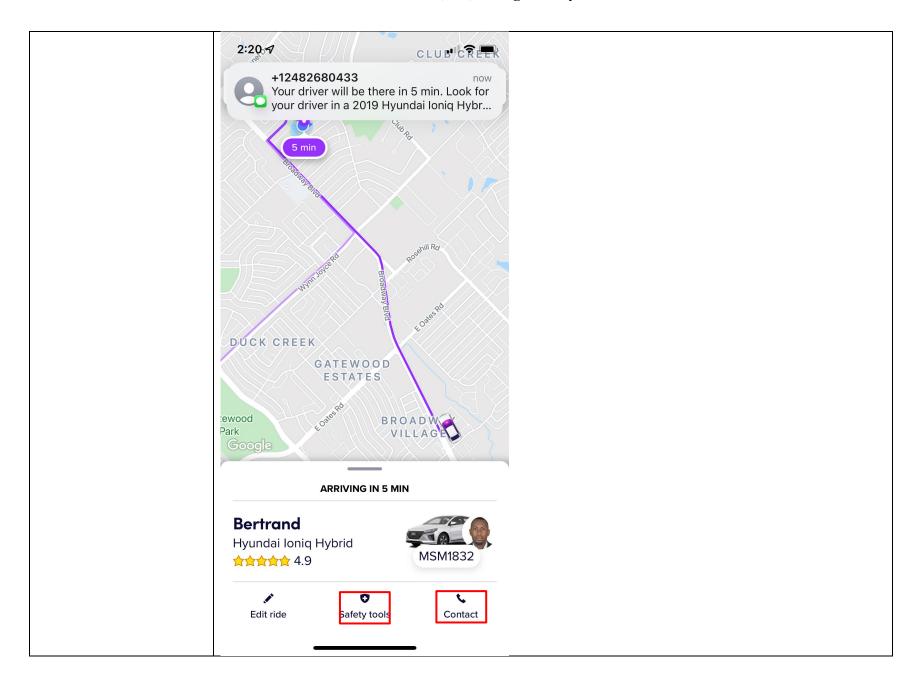
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 699 of 1092

Claim - 7,630,724	Accused Products
	Sharing your ride
	Our goal for Shared rides is to fill the empty seats in cars with riders going in the same direction. Chaining brings us one step closer to achieving that goal by pairing multiple parties together in one ride.
	It's important that you only request Shared rides for one or two riders and accurately choose the number of people in the app. If you don't follow this rule, the driver will be prompted to cancel your ride upon arrival.
	https://help.lyft.com/hc/e/articles/115013078848-About-Shared-rides
	See Claim 9[C] above.
	With respect to the limitations reciting the cellular phone number(s) or telephone number(s), the claim is met either literally or under the doctrine of equivalents.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
13. A method for providing a cellular phone communication network	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: sending each participating user directly or to a server for retransmission the geographic location of the sender of a message.
as in claim 9 including the additional steps of: sending each participating	
user directly or to a server for retransmission the geographic location of the	Lyft meets this limitation because riders/drivers add their account/identity information which includes their cell phone number. Additionally, when using the Lyft app, IP based communication to the Lyft server(s) includes IP addresses. For example, Lyft's servers continuously fetch the location information
sender of a message.	of all the passengers and the driver present in a ride. Therefore, even when a passenger sends a message to the driver, the geographic location is retransmitted from their phone.

Claim - 7,630,724 **Accused Products** The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to method for providing a cellular phone perform, and/or contributing to the performance of: automatically calling the nearest fixed location from communication network a particular group including: police stations, fire stations, or EMTs or other fixed locations by one or more of the cellular phone network participants. as in claim 9 including the additional steps of: automatically calling the nearest fixed location For example, Lyft provides an emergency button to its passengers which allows Lyft to automatically from a particular group including: police stations, place a 911 call to the nearest fixed location such as a police station. fire stations, or EMTs or other fixed locations by one or more of the cellular phone network participants. 911 is just a few taps away **Emergency** assistance To give you immediate access to emergency help in case you ever need it (and to help you ride a little easier even when you don't), we built a 911 button into your app. It's Your current location 1117 18th St. there for both riders and drivers, and when you tap it, the San Francisco, CA app will display your current location and vehicle info so you can quickly share details with emergency Your vehicle info Chevy Malibu dispatchers. ABC0234 · White

https://www.lyft.com/safety

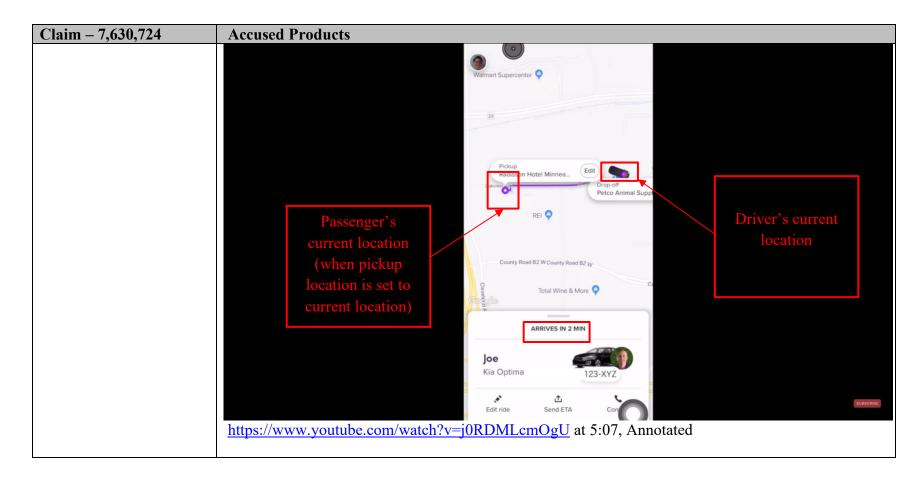
Call 911

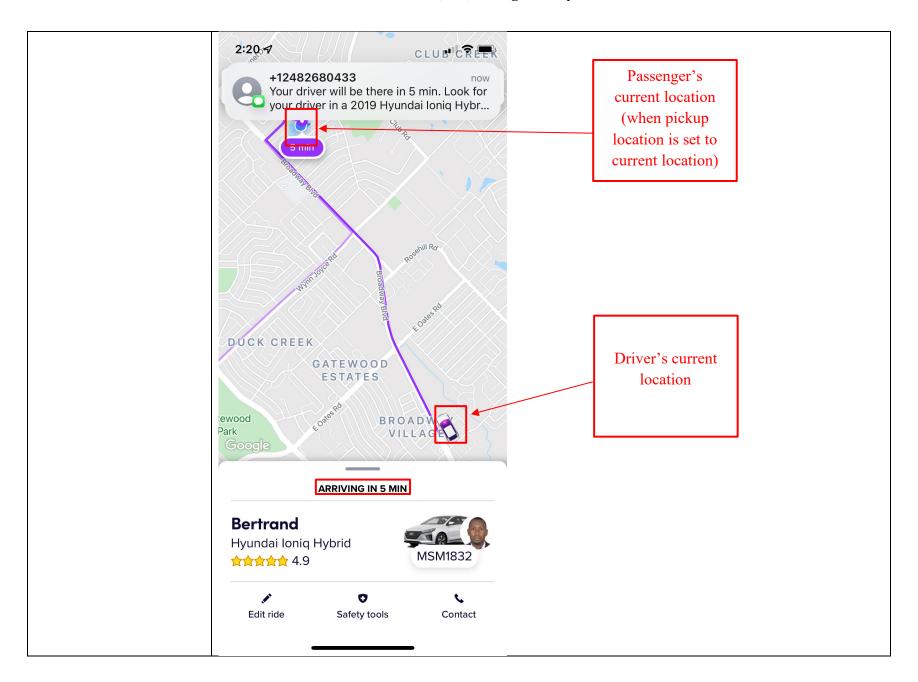


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 702 of 1092

Claim - 7,630,724	Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS
	reserves the right to supplement these contentions pursuant to production of such source code by Lyft
	and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other
	reasons.
15. A method for	The Lyft Accused Products infringes directly and/or indirectly by performing, inducing others to
providing a cellular phone	perform, and/or contributing to the performance of: entering on a user's touch display screen a new track
communication network	by touching the display screen at the correct map location and selecting the type of symbol to be
as in claim 9 including the	displayed, causing that symbol identifier to be transmitted to the other network participants either directly
additional steps of:	or through a server and as the track's location moves, sending new location data to the other participants
entering on a user's touch	relative to the new track so that each of the participating user's display is updated with the new track's
display screen a new track	position.
by touching the display	
screen at the correct map	
location and selecting the	
type of symbol to be	For example, Lyft allows passengers to change the destination address while executing a ride. As a
displayed, causing that	result, the new location is transmitted to the co-passengers and the driver on their mobile devices.
symbol identifier to be	Further, a new symbol is displayed for the new location selected by the passenger.
transmitted to the other	
network participants either	
directly or through a	
server and as the track's	
location moves, sending	
new location data to the	
other participants relative	
to the new track so that	
each of the participating	
user's display is updated	
with the new track's	
position.	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 703 of 1092

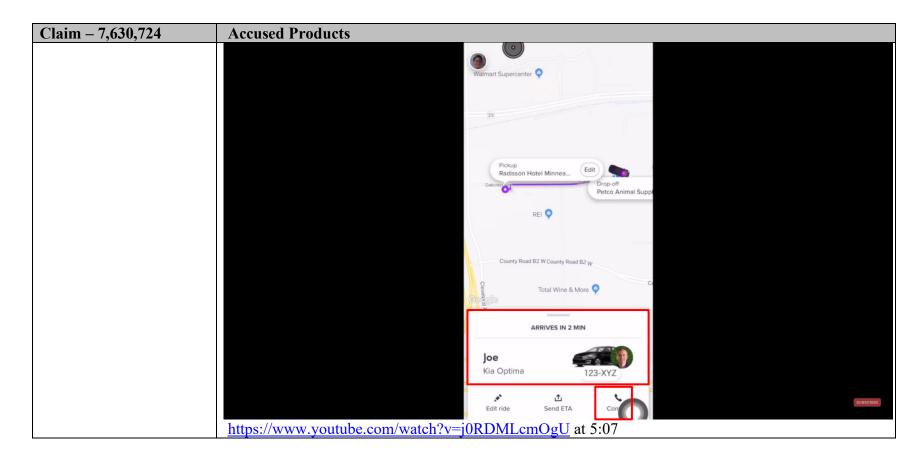


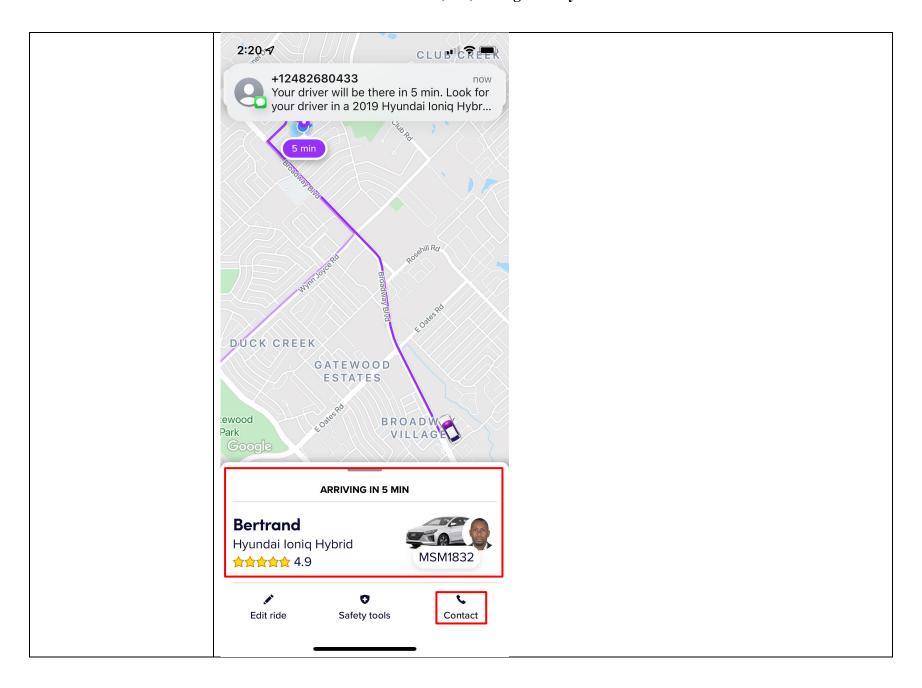


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 705 of 1092

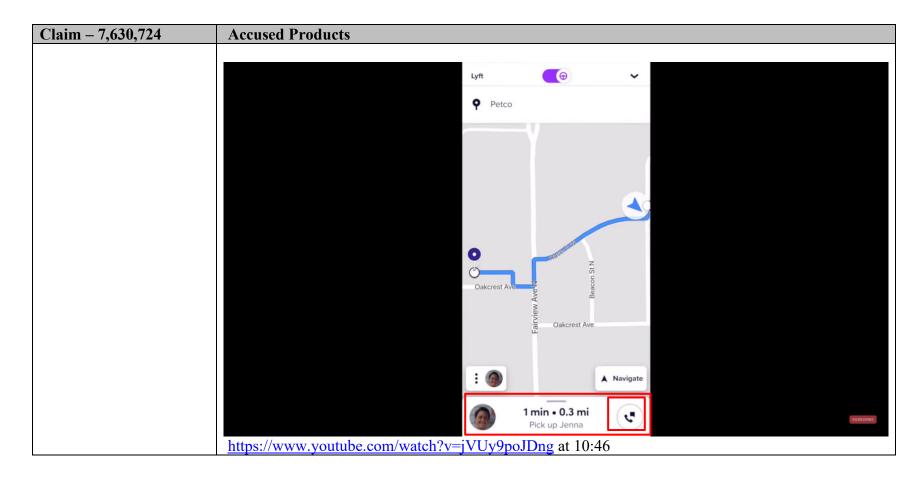
Claim – 7,630,724	Accused Products
16[P]. A method of	See claim 9[A] above
providing a cellular phone	
communication network	
for designated	
participating users, each	
having a similarly	
equipped PDA cellular	
phone that includes a	
CPU, a GPS navigational	
system and a touch screen	
display comprising:	
16[A]. selecting an icon	The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further
that establishes rapid	infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the
voice call initiation and	performance of: selecting an icon that establishes rapid voice call initiation and communication to the
communication to the	users of the cellular telephone PDA/GPS network system by touching their symbol on the phone's a touch
users of the cellular	screen.
telephone PDA/GPS	
network system by	
touching their symbol on	
the phone's a touch screen;	Lyft meets this limitation because riders/drivers are provided with the functionality of selectable interface
	elements for calling the drivers/riders. For example, when the driver is matched to the passenger, both
	the driver and the passenger get the call icon ("rapid voice initiation and communication") on their
	respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them
	call each other by tapping the call icon on their respective touch screen display.

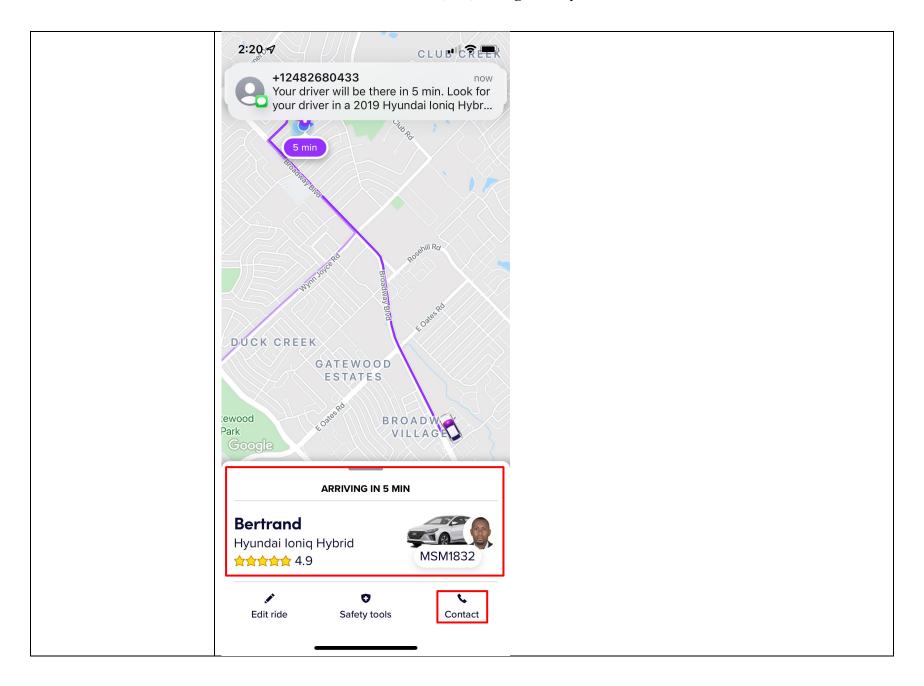
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 706 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 708 of 1092

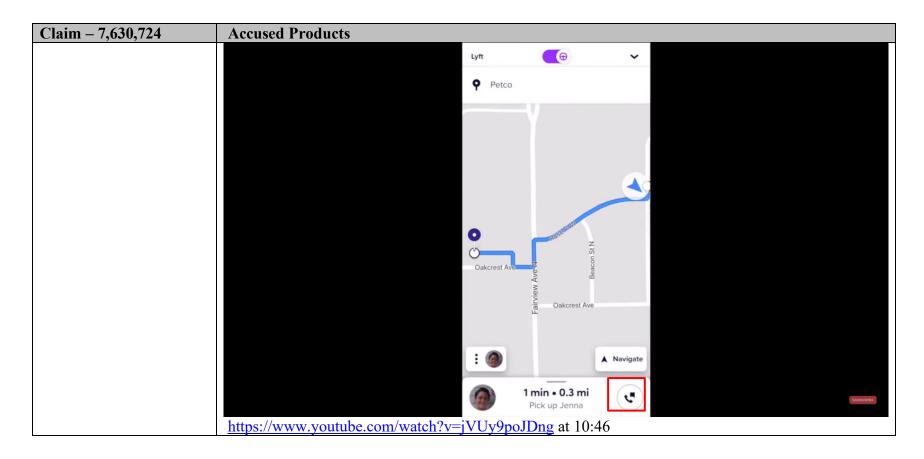


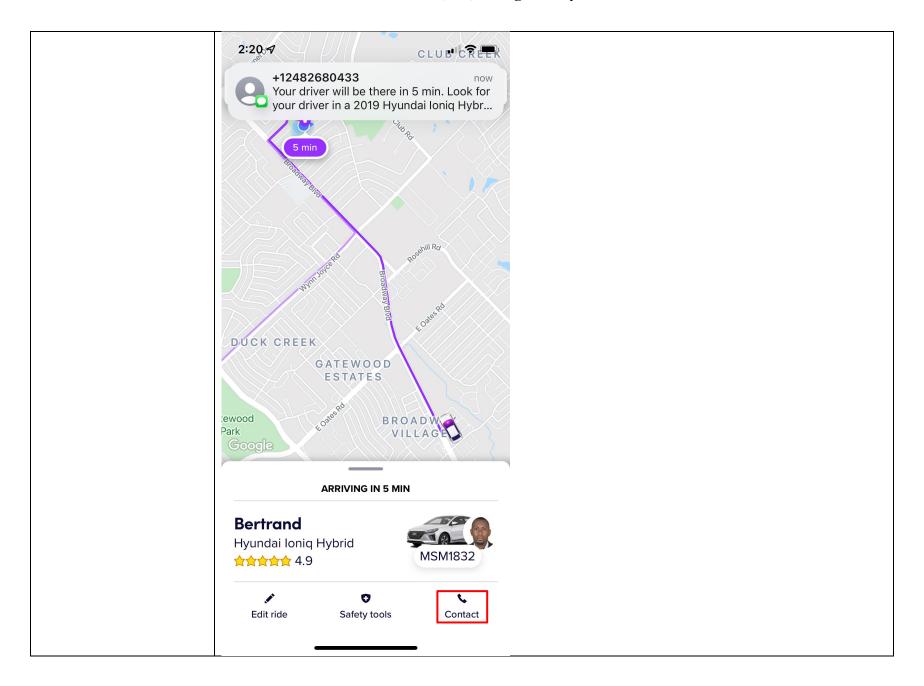


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 710 of 1092

Claim - 7,630,724	Accused Products
	See claim 9[D] above.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
16[B]. transmitting high speed internet rapid transmission of operator selected text messages, photographs, voice recordings and video to	The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: transmitting high speed internet rapid transmission of operator selected text messages, photographs, voice recordings and video to other cellular phone users using the touch screen.
other cellular phone users using the touch screen;	Lyft meets this limitation because the riders/drivers, via the Lyft apps, are provided with the functionality of communicating messages to drivers/riders using selectable interface elements on the display. The messages include text, voice, and/or video. The messages can be transmitted over IP based communications. For example, when the driver is matched to the passenger, both the driver and the passenger get the call icon on their respective mobile phones display in the Lyft driver and Lyft app respectively through which both of them call each other by tapping the call icon on their respective touch screen display.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 711 of 1092

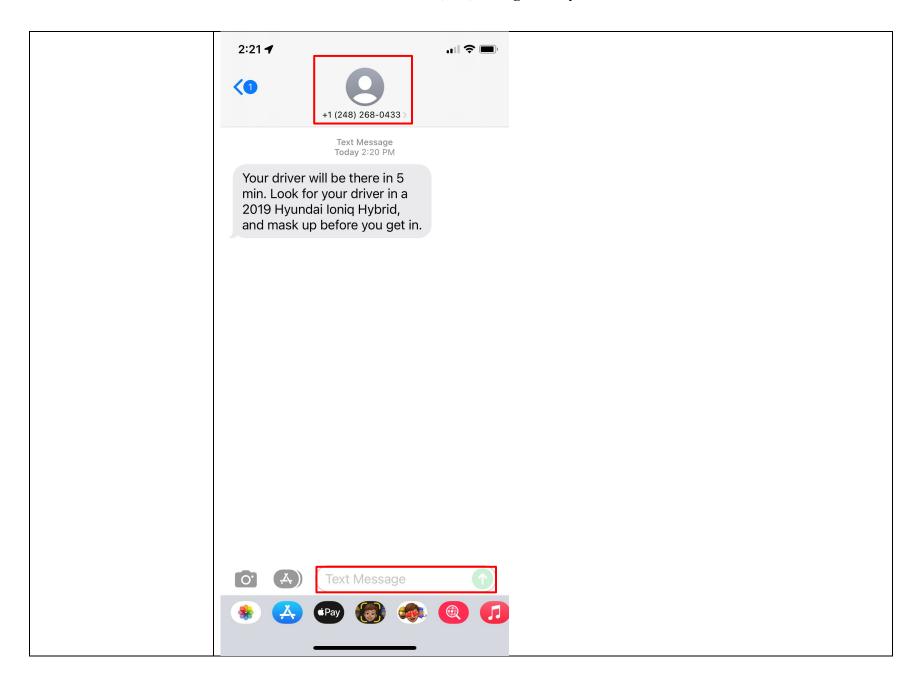


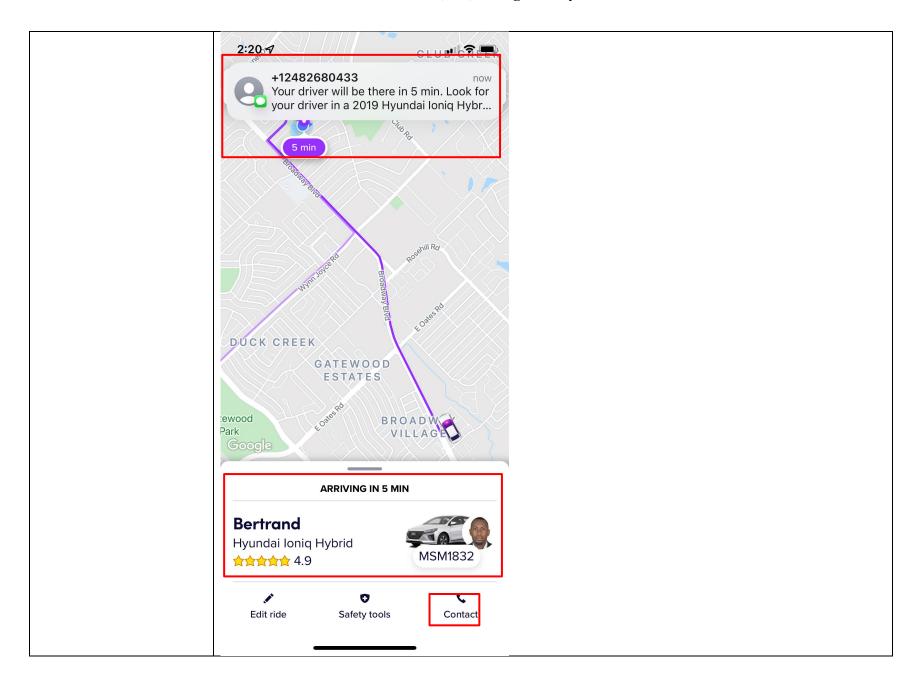


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 713 of 1092

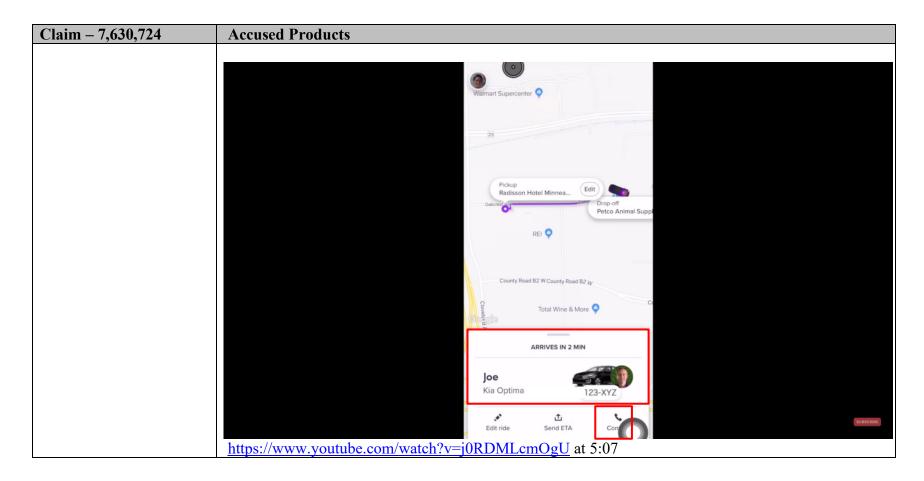
Claim - 7,630,724	Accused Products	
	X Contact Jenna	
	I'm your driver, Joe >	
	Hi, where are you?	
	Be there in 1 min >	
	Stuck in traffic >	
	Can't take a call now, sorry >	
	I'm in a black Kia Optima Hybrid >	
	Gate code, please? >	
		SURSCHIE
	https://www.youtube.com/watch?v=jVUy9poJDng at 11:21	

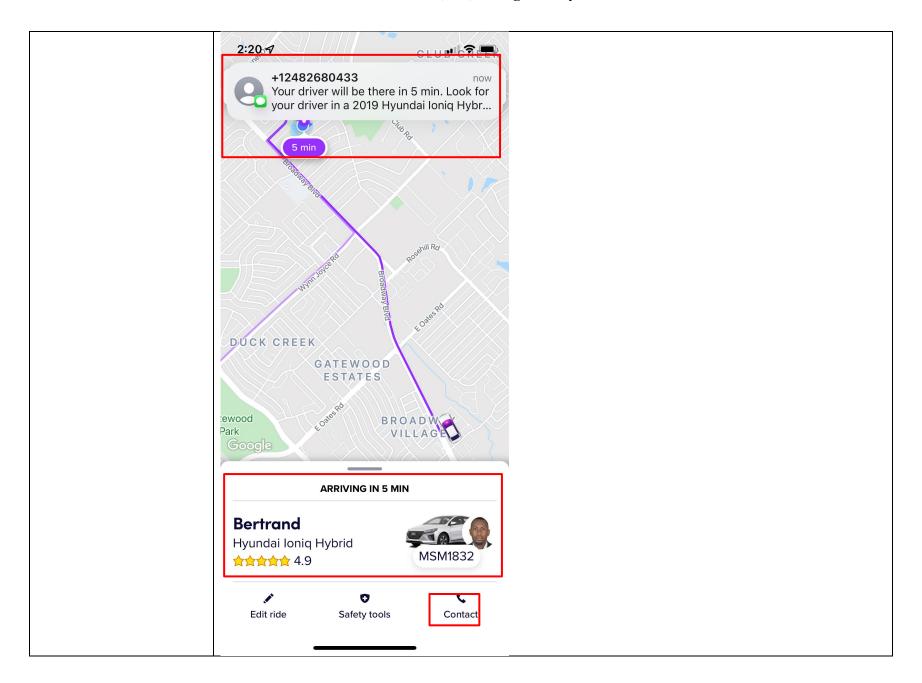
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 714 of 1092



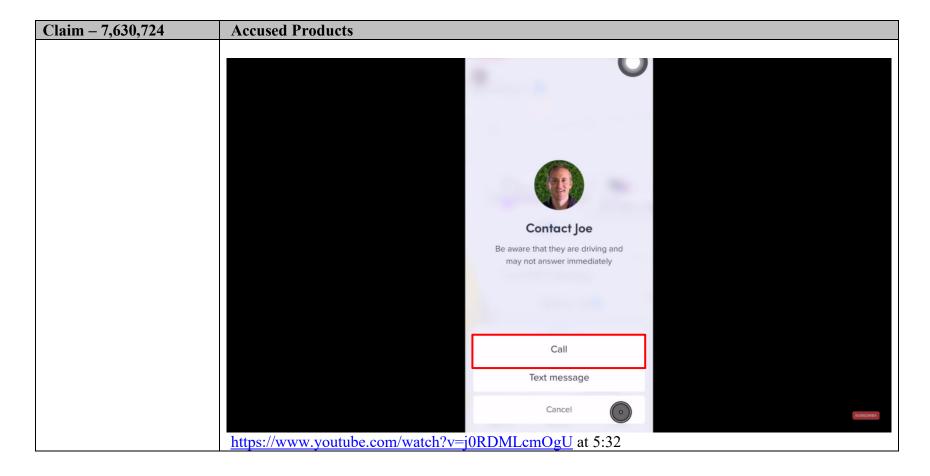


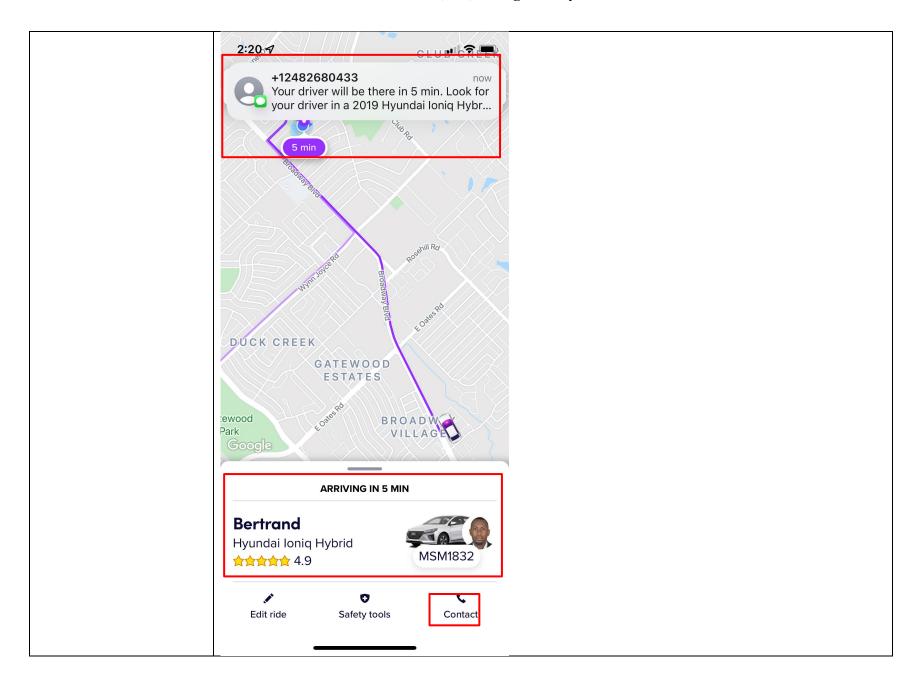
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 716 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 718 of 1092

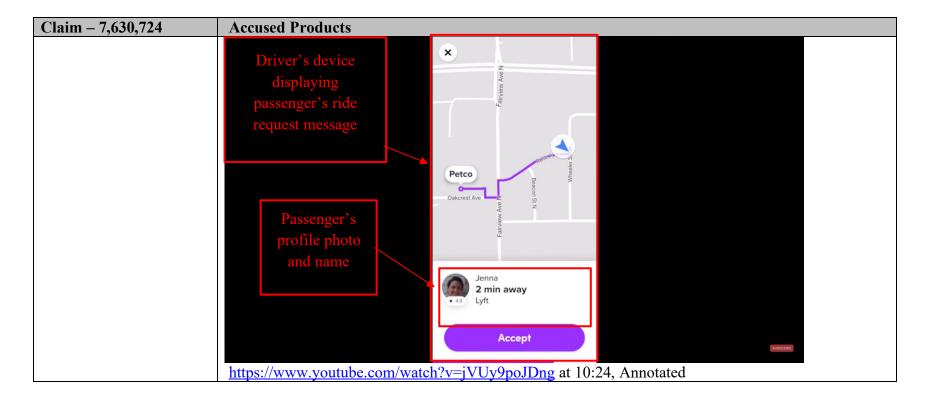


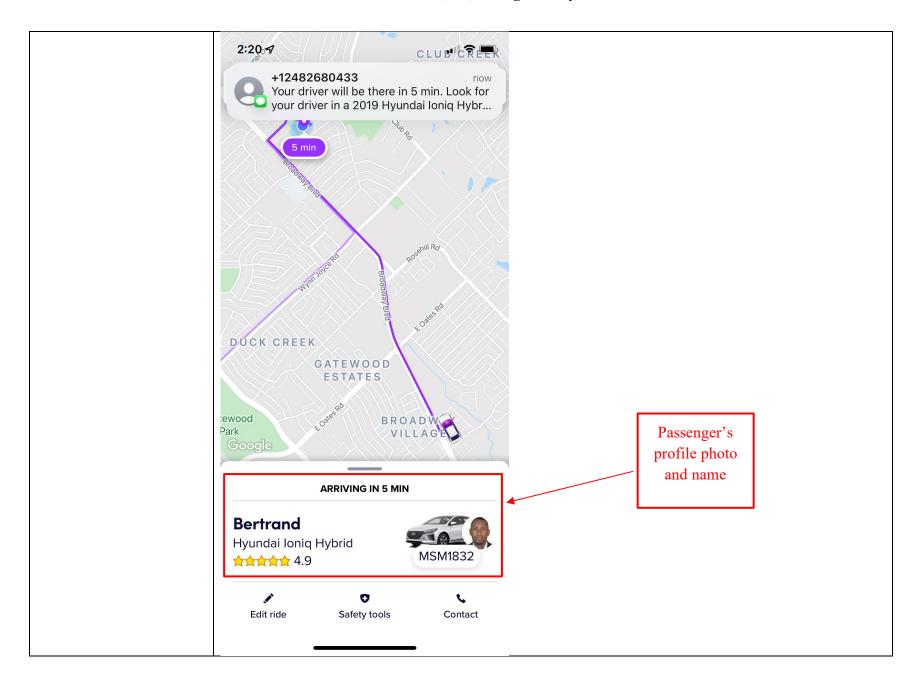


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 720 of 1092

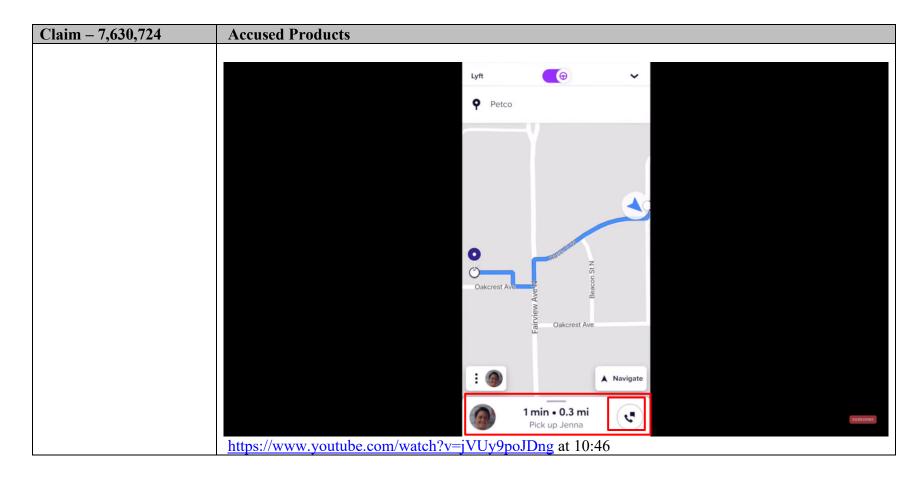
Claim - 7,630,724	Accused Products
	See claim 9[D] above.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
16[C]. accessing a server for establishing high speed internet communications between said cellular phone network users and said server; and	The Lyft Accused Product(s) performs a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: accessing a server for establishing high speed internet communications between said cellular phone network users and said server.
	Lyft meets this limitation because the riders/drivers, via the Lyft apps, use IP based communications to/from Lyft server(s). For example, when the passenger requests a ride from the Lyft app installed on their mobile phone, the ride request message is broadcasted to the nearby drivers who are online on the Lyft driver app.
	For example, when the driver accepts the ride request of the passenger, the passenger's mobile phone receives the driver's information such as name, location, and driver's photo. After the passenger and the driver match, both of them get the option ("icon") to text and call ("low speed communication") each other.

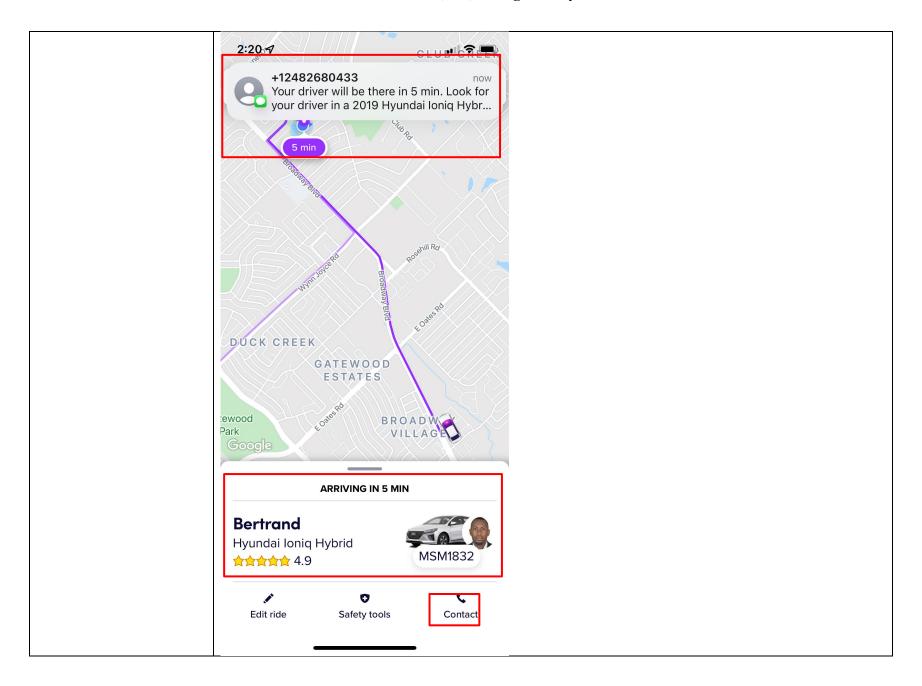
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 721 of 1092



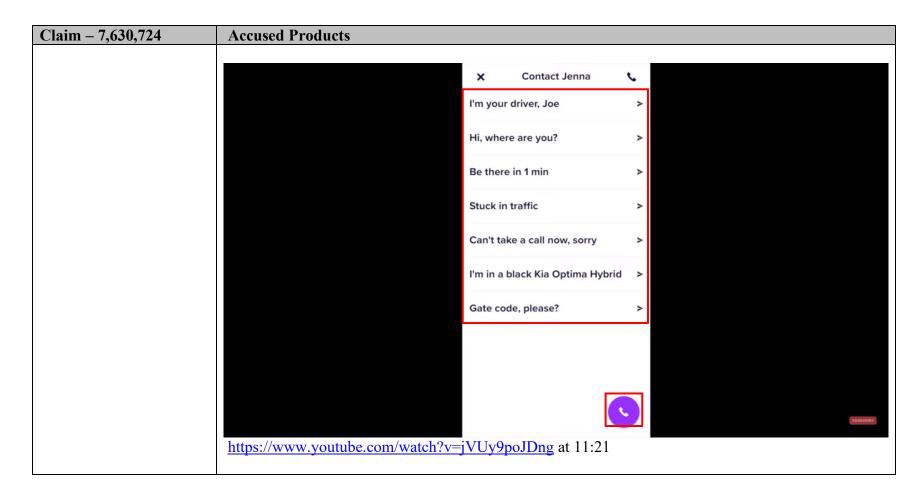


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 723 of 1092

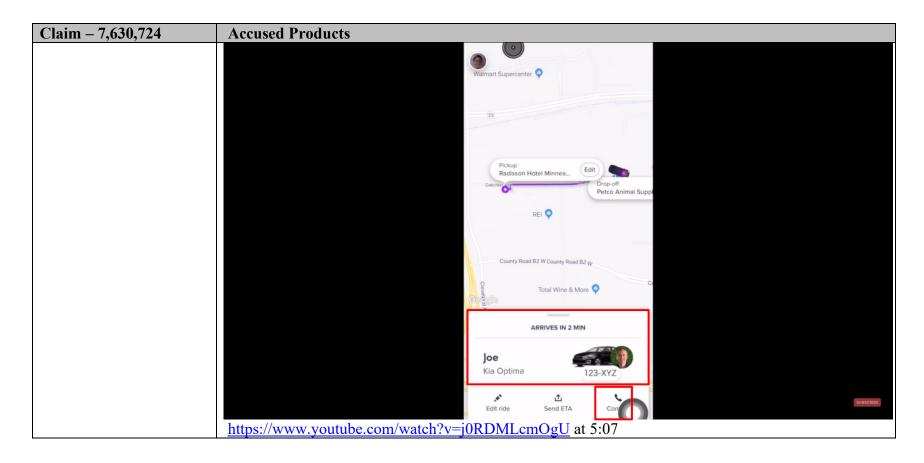


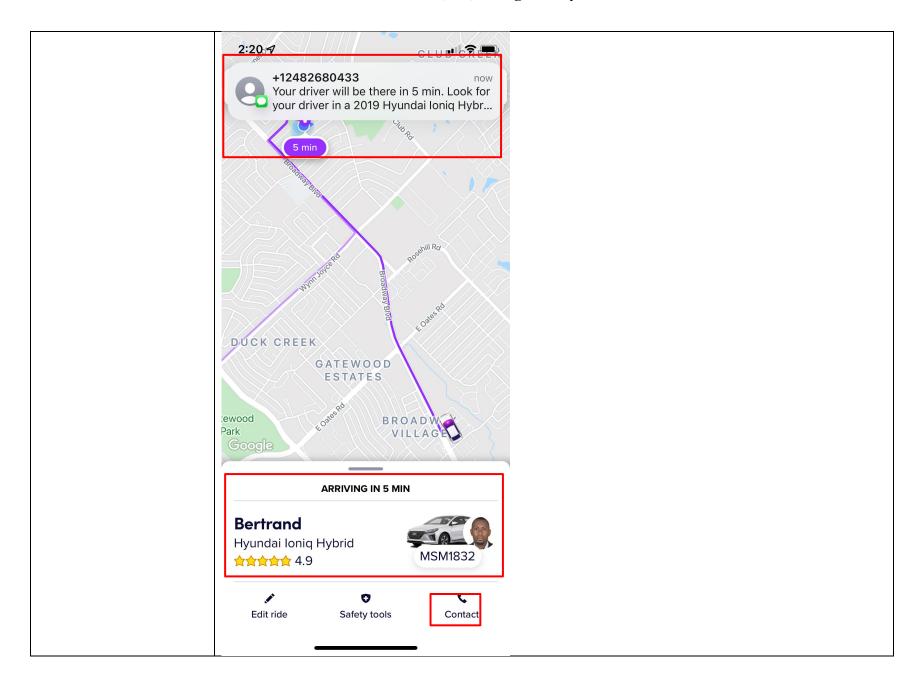


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 725 of 1092

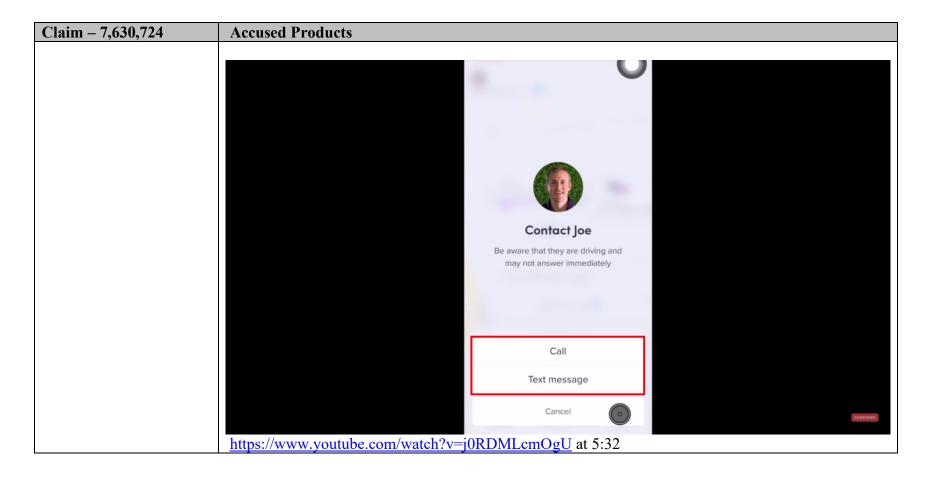


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 726 of 1092

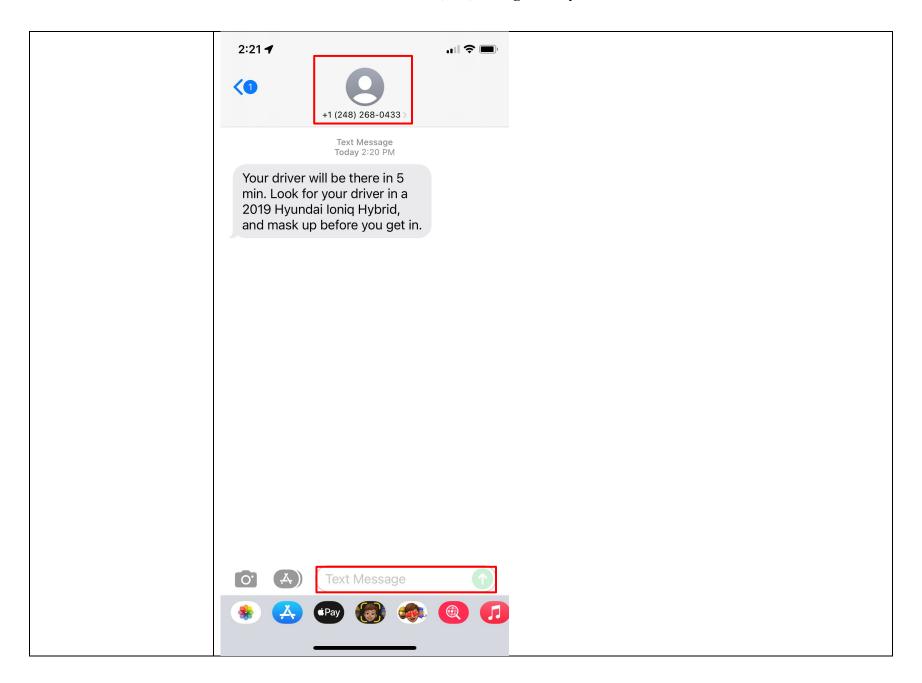


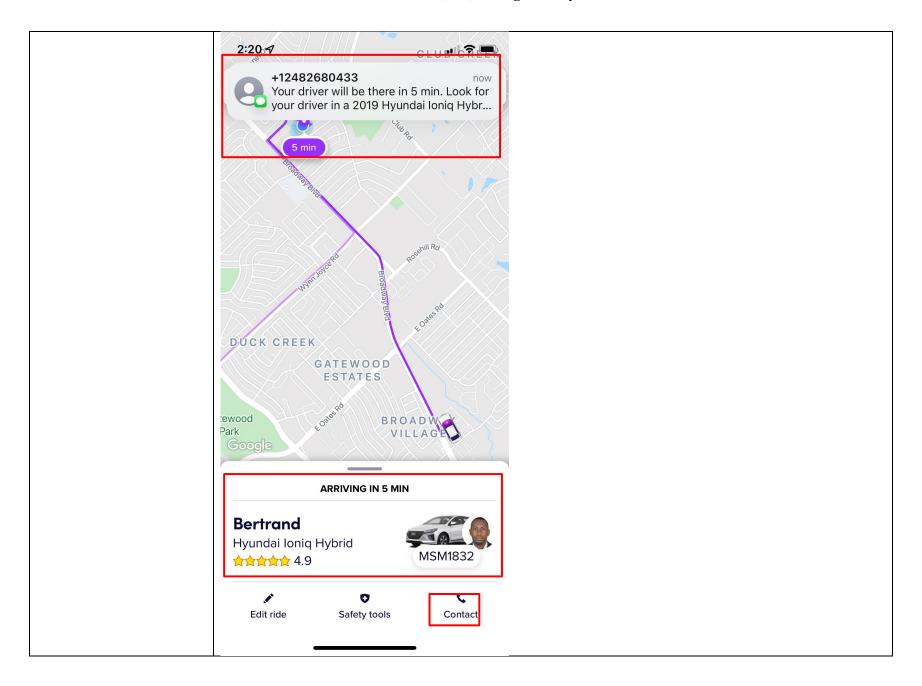


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 728 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 729 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 731 of 1092

Claim - 7,630,724	Accused Products
	See claim 9[D] above.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
16[D]. generating at the server networks enabling anonymous voice and data communications so that neither the originator of the phone call or data transmission nor the receiver of the phone call	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: generating at the server networks enabling anonymous voice and data communications so that neither the originator of the phone call or data transmission nor the receiver of the phone call or data transmission need to know the other's phone number, name or other identifier other than a symbol location on a map.
or data transmission need to know the other's phone number, name or other identifier other than a symbol location on a map.	Lyft meets this limitation because the Lyft server(s) is an intermediary between riders/drivers using their respective Lyft apps for communication of data. Communications between riders/drivers do not require knowledge of the drivers/riders' identity or phone number. For example, Lyft hides the personal phone numbers of the driver as well as the passenger when a call is placed by either the driver or passenger Therefore, Lyft's servers generate an anonymous voice and data communication where both participants do not see their phone numbers.
	See claim 9[D] above.
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.

Attachment C for US Patent No. 10,299,100 Against Lyft Accused Products

Based on information presently available,¹ Defendant AGIS Software Development LLC ("AGIS Software") contends that Plaintiff Lyft Inc. ("Lyft" or "Plaintiff") infringes claims 1-31 (the "Asserted Claims") of U.S. Patent No. 10,299,100 (the "'100 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise the Lyft and Lyft Driver applications, servers, and services manufactured, used, or sold by Lyft, Inc. during and after 2016. AGIS Software reserves the right to seek leave of court to amend this list of Accused Products after the filing of an amended complaint or as discovery progresses.

Lyft directly infringes each of the Asserted Claims by making, using, importing, testing, distributing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. Lyft knows, or should have known, that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

C-1

¹ There is no operative complaint asserting non-infringement of any patent claim in this action at this time. AGIS Software reserves the right to update its contentions upon receipt of any future amended complaint.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 733 of 1092

Attachment C for US Patent No. 10,299,100 Against Lyft Accused Products

The following chart identifies specifically where each limitation of each Asserted Claim is found within the Accused Products, and in particular, the corresponding elements that meet the limitations in the Lyft and Lyft Driver applications, services, and services. On information and belief, each charted version of the Lyft and Lyft Driver Apps are representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android and iOS operating systems.

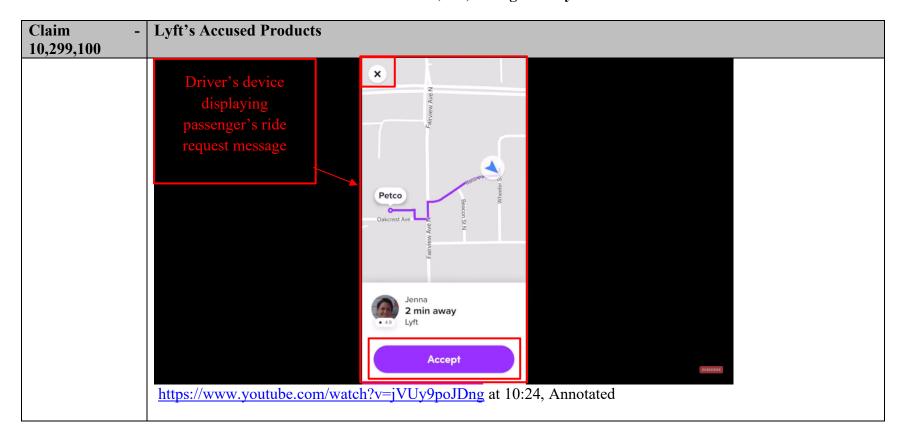
AGIS Software does not concede that any claims of the '100 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its accused products. Accordingly, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS Software. Furthermore, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

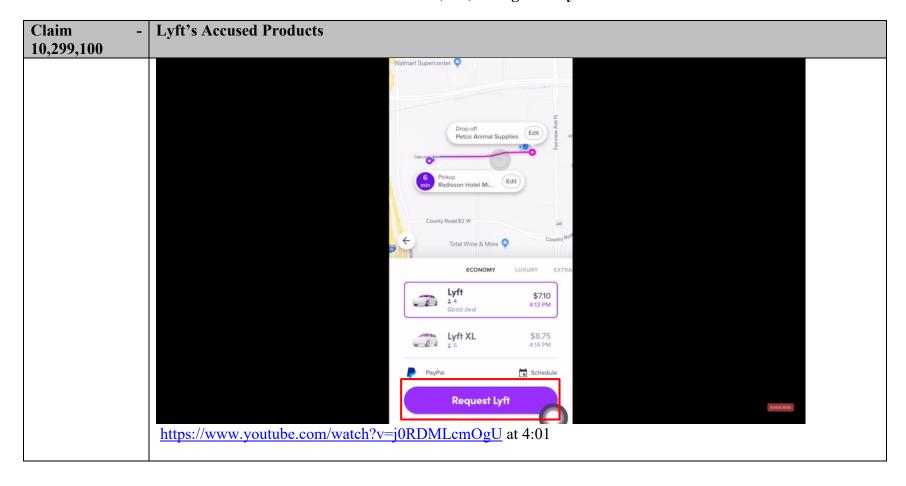
The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

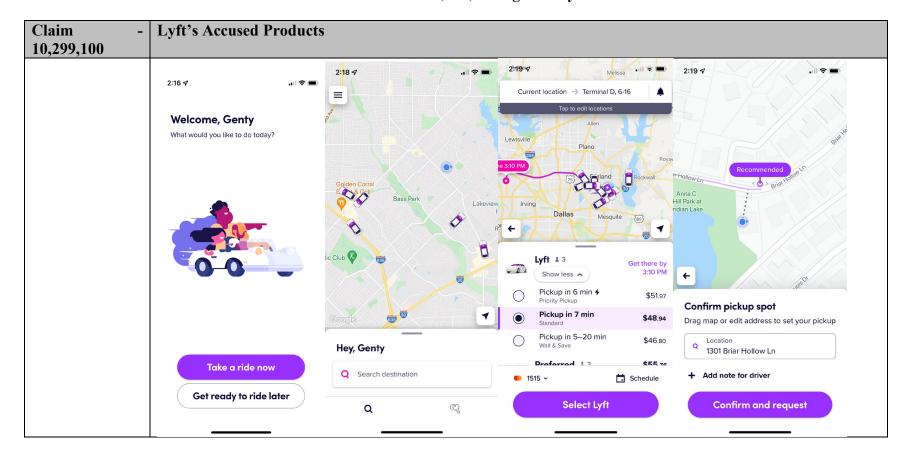
² The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. 205 (E.D. Tex. Oct. 10, 2018); *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. 147 (E.D. Tex. Dec. 8, 2020); *AGIS Software Dev. LLC v. T-Mobile USA, Inc., et al.*, No. 2:21-cv-00072-JRG, Dkt. 213 (E.D. Tex. Nov. 10, 2021). AGIS Software reserves the right to update its constructions and contentions in view of this Court's claim construction order.

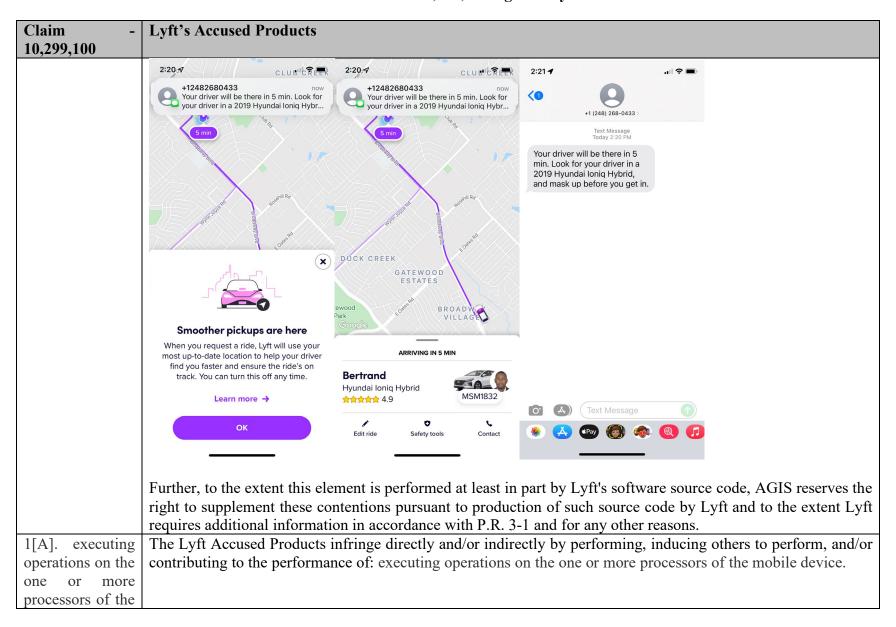
Claim -	Lyft's Accused Products
10,299,100 1[P]. A method performed by a mobile device having a display and one or more processors, the method comprising:	The Lyft Accused Products perform a computer implemented method as set forth below. Lyft further infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method performed by a mobile device having a display and one or more processors.
	For example, Lyft provides Lyft Rider app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel.
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app

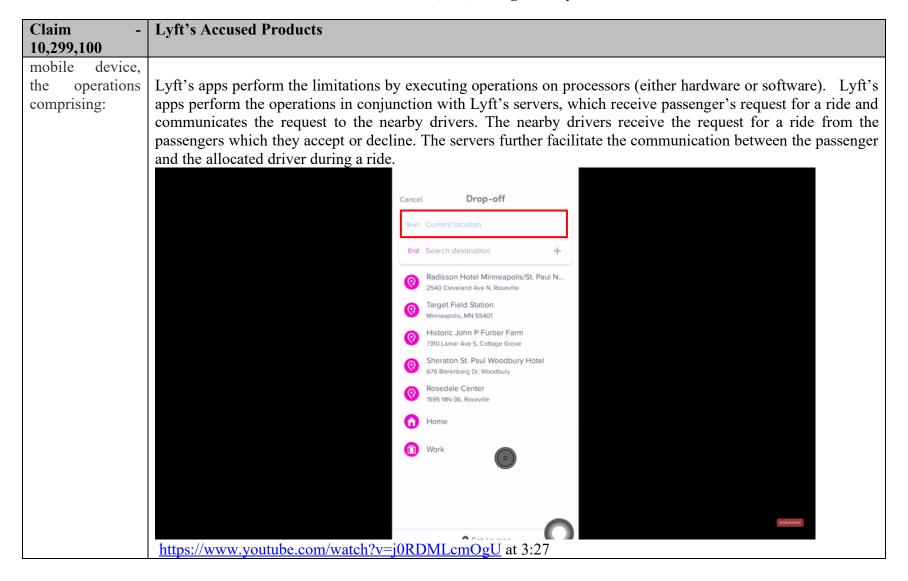
Claim - 10,299,100	Lyft's Accused Products
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	Calcing the original state of the original s
	Go online
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests.
	https://www.lyft.com/hub/posts/how-to-give-a-ride

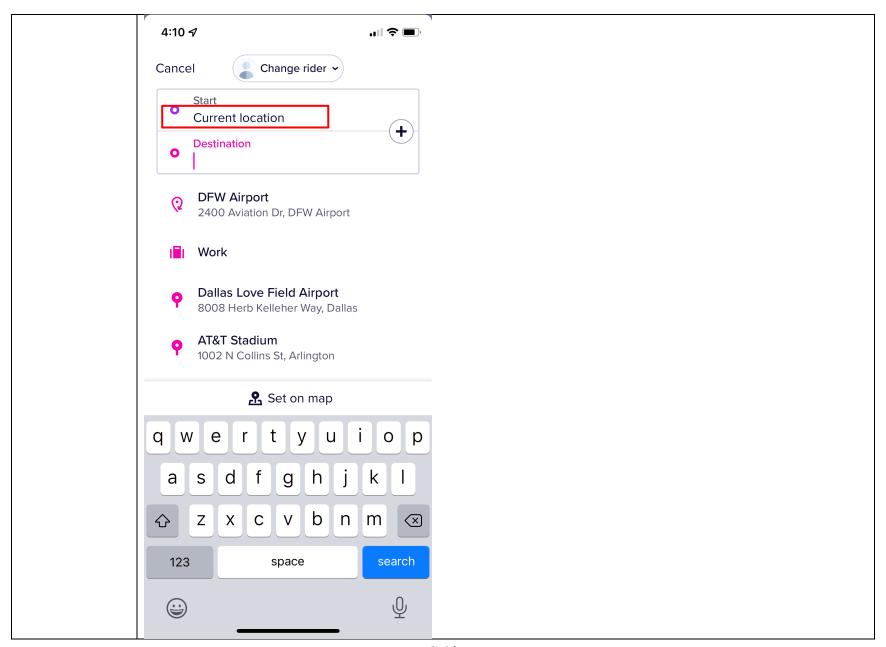


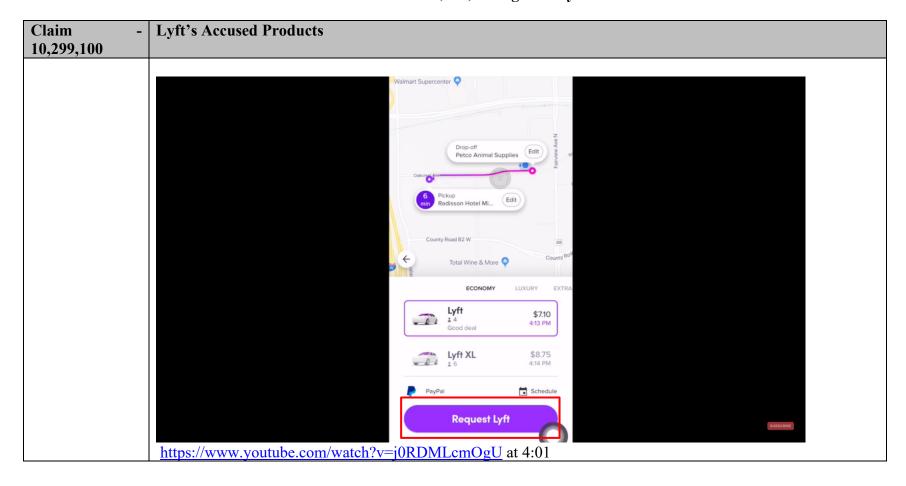


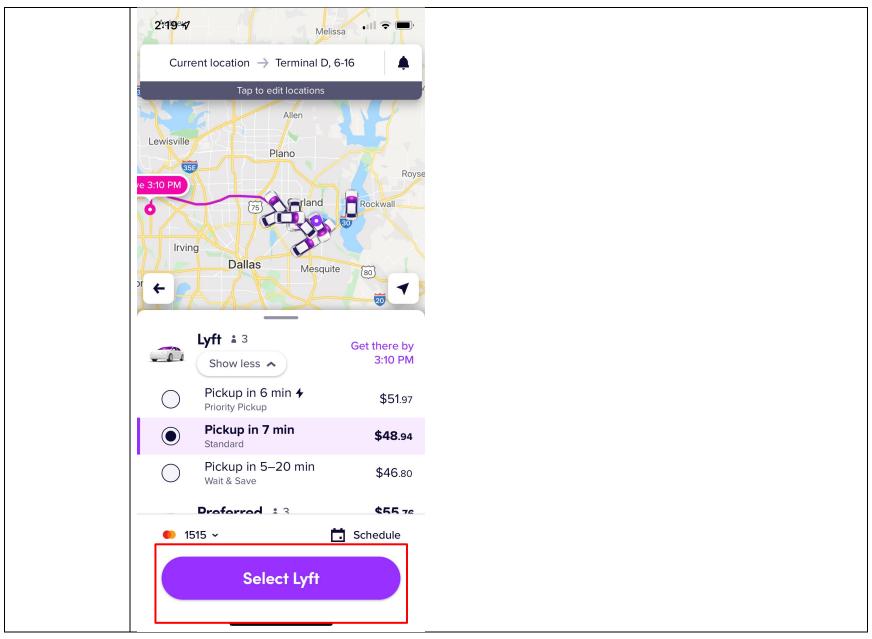


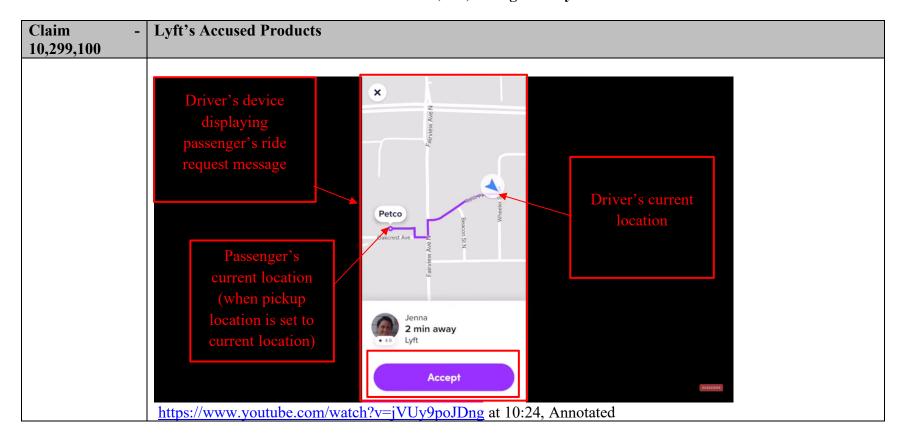


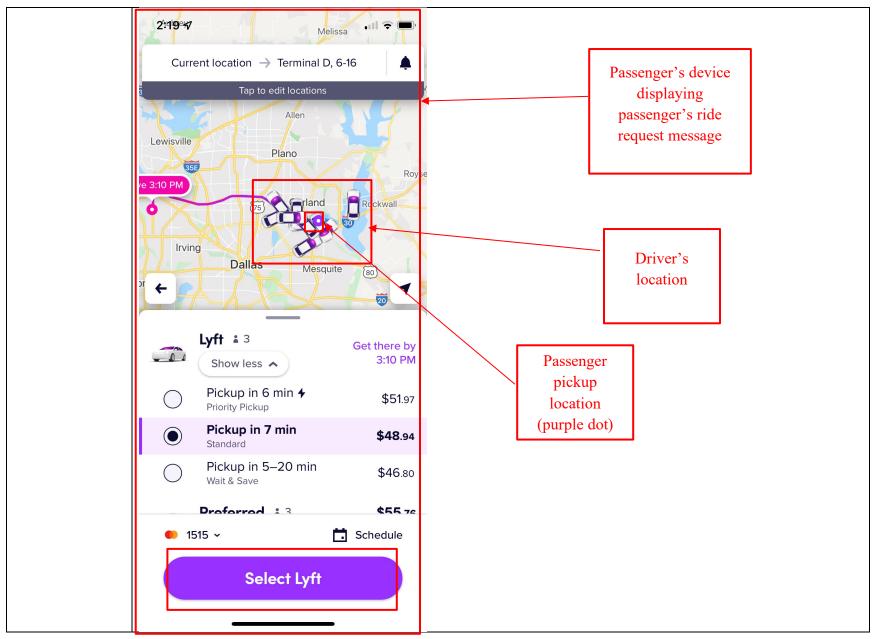


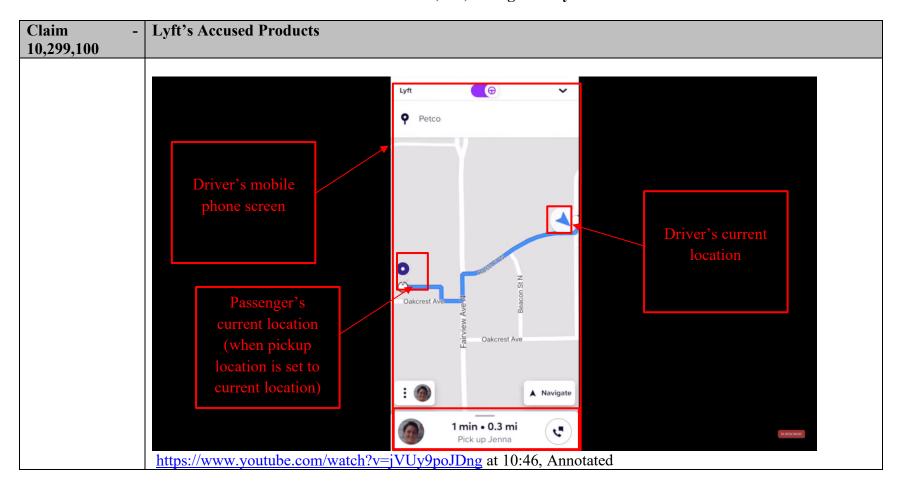


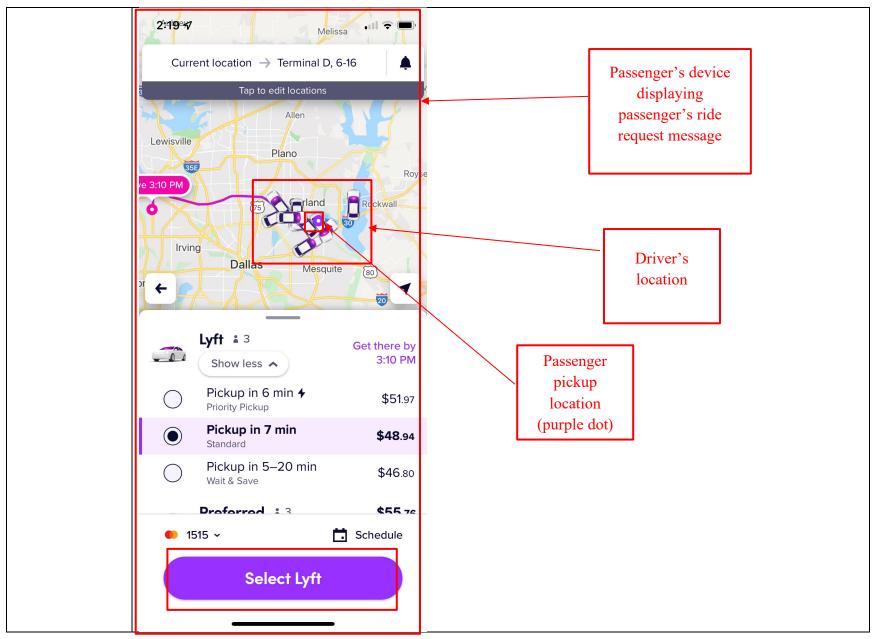


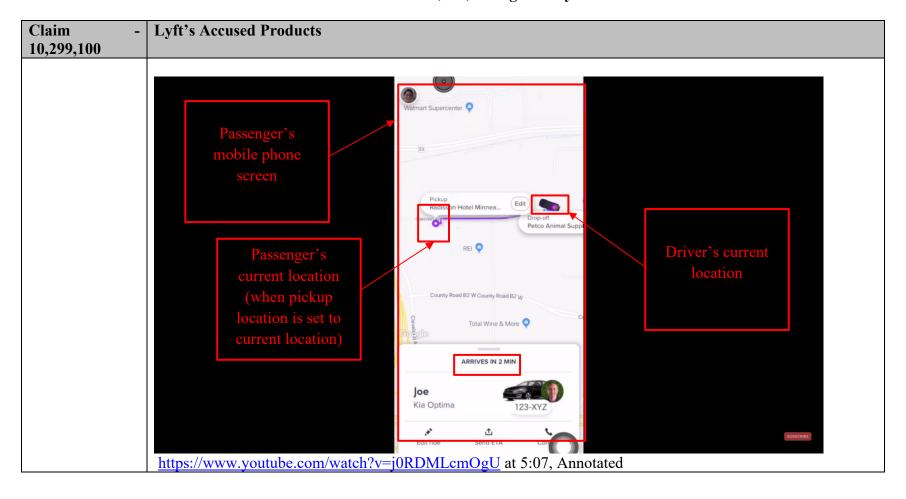


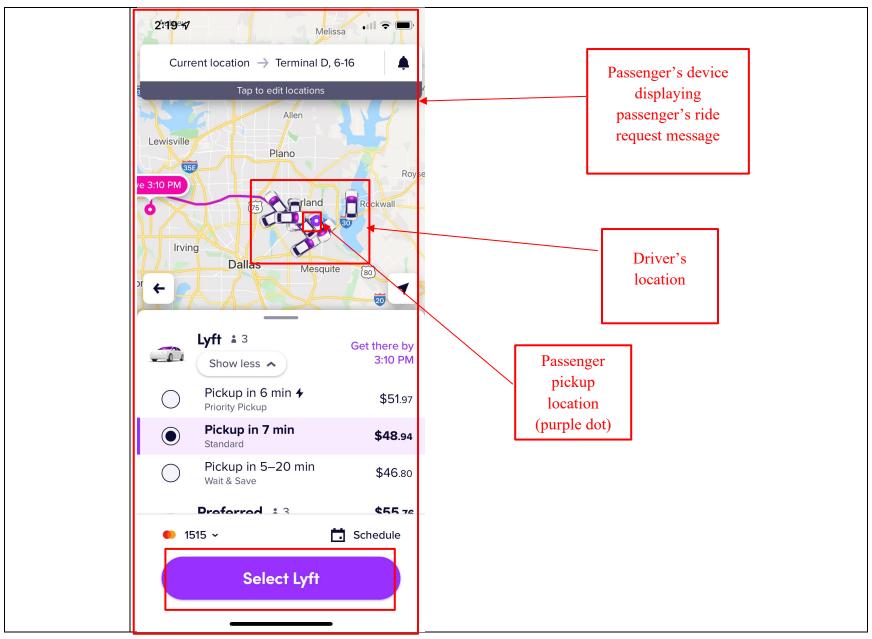


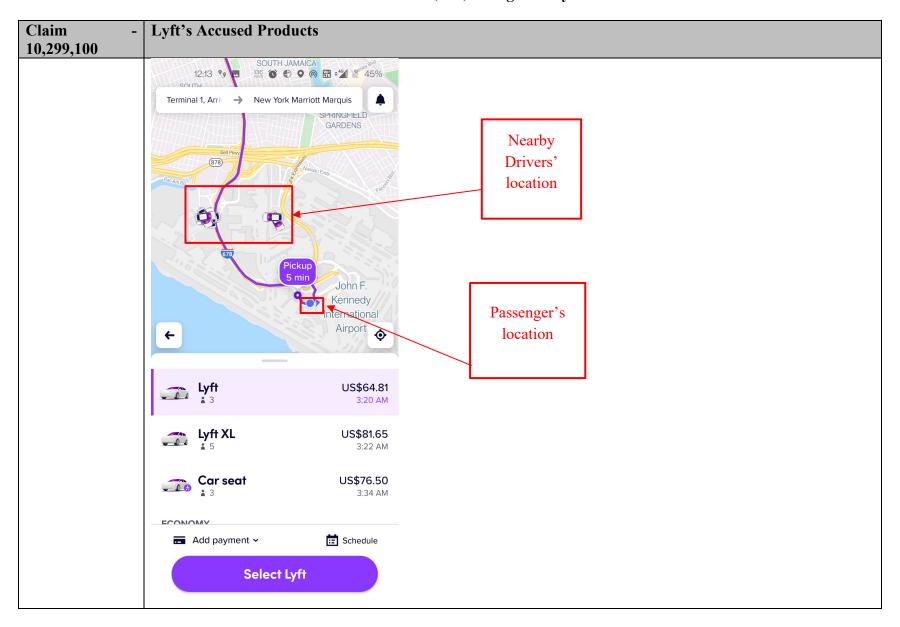


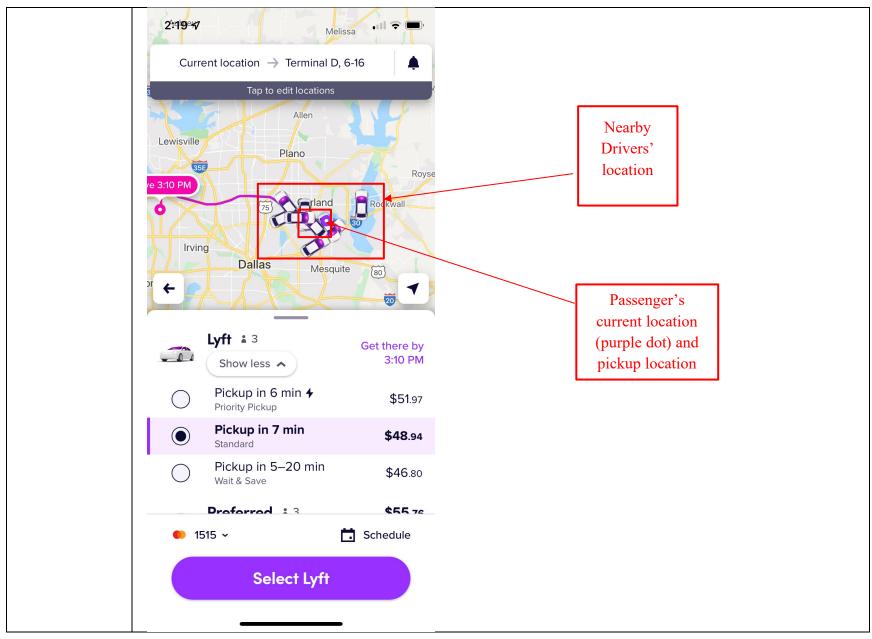




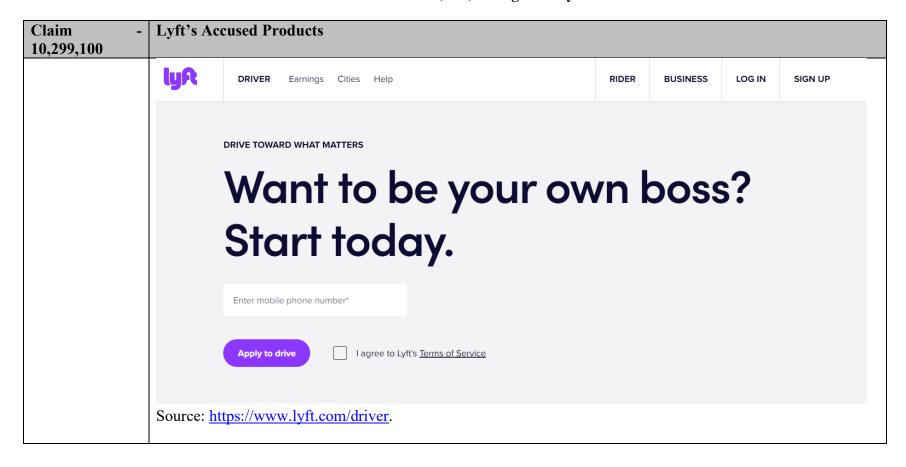


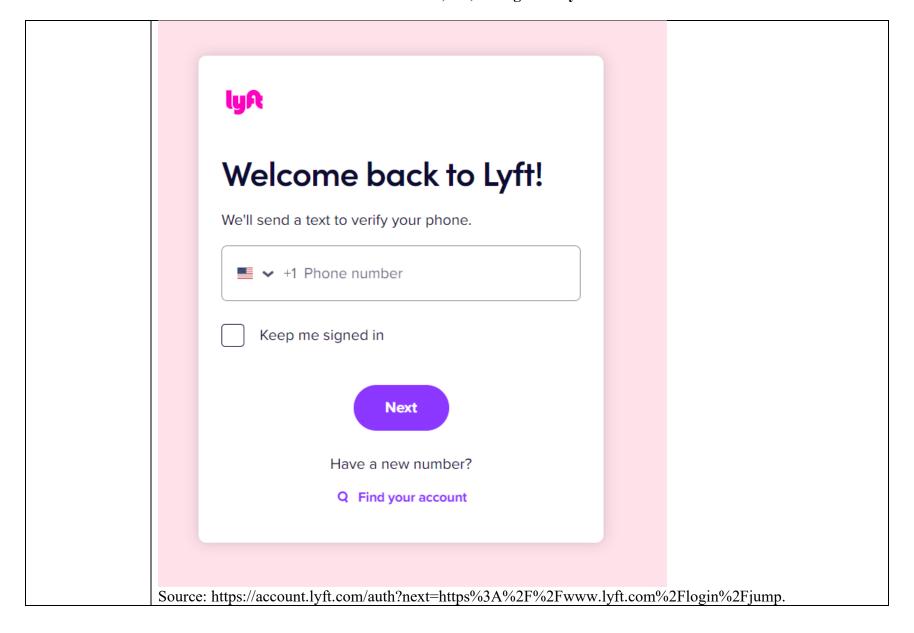






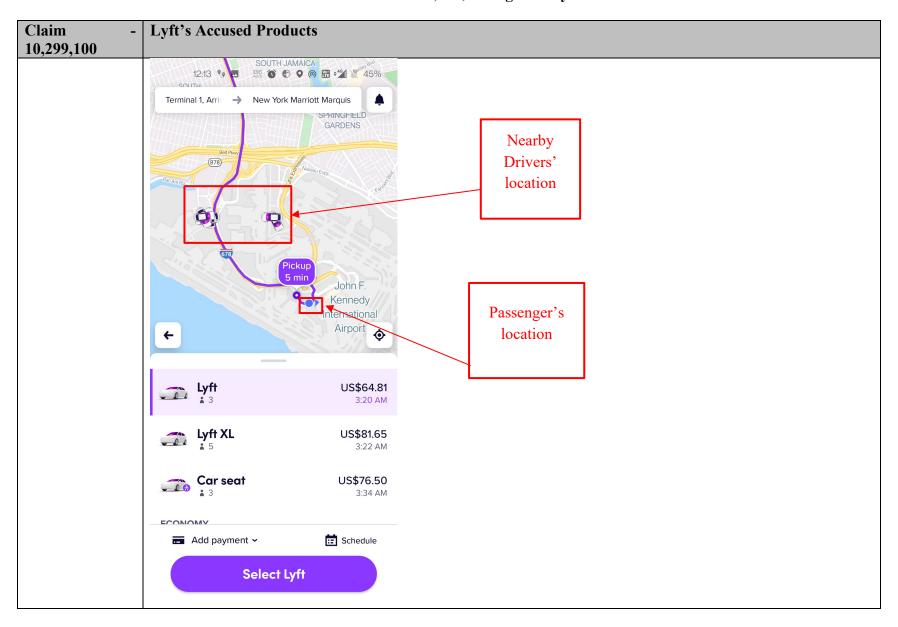
Claim - 10,299,100	Lyft's Accused Products
1[B]. associating the mobile device with an identifier, wherein the identifier	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: associating the mobile device with an identifier, wherein the identifier corresponds to a network participant.
corresponds to a network participant	The Lyft app, either alone or in conjunction with services provided Lyft's server and/or services, performs this limitation when it receives the account creation data from the Lyft app for riders. The Lyft app also performs this limitation, after account creation, during the sign-in or log-in process from the Lyft app for riders. The Lyft app also performs this limitation when the Lyft server requests status or other data via the Lyft app for riders. In all cases, the identifier is information associated with the identity of the rider, account, device, phone number, or Lyft app for riders. For example, a Lyft passenger sets up their account by providing details including but not limited to name, email address, and phone number. After verifying the details of the passenger, Lyft adds them to the Lyft platform or network of drivers and passengers. Thereafter, the passenger starts booking rides.

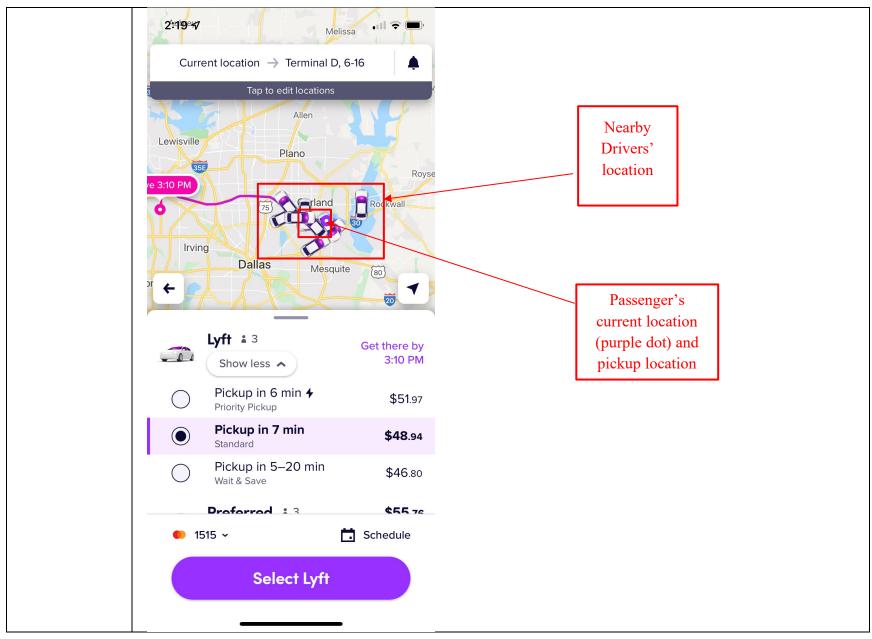




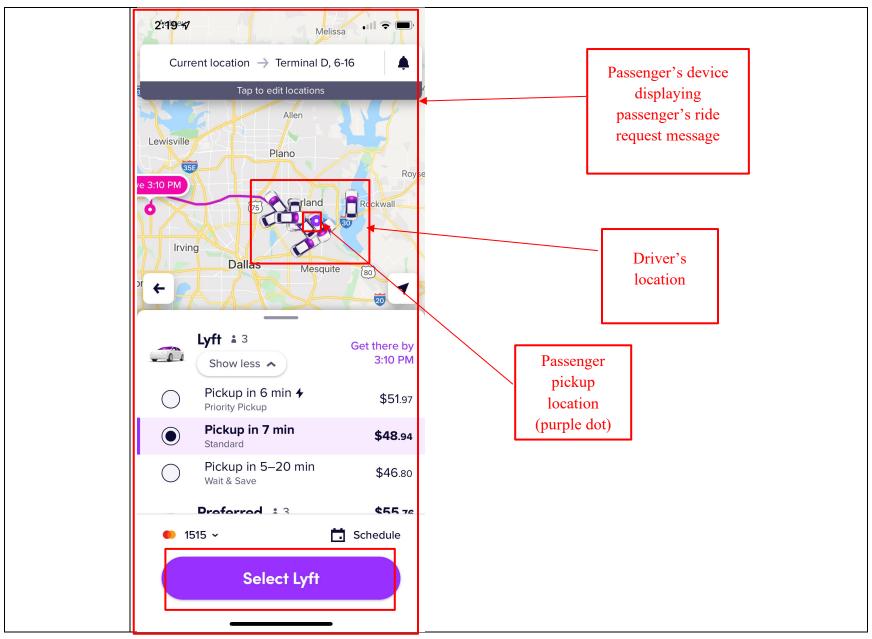
Claim - 10,299,100	Lyft's Accused Products
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	 That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[C]. determining a device location corresponding to	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: determining a device location corresponding to a geographical location of the mobile device.

Claim -	Lyft's Accused Products
10,299,100	
a geographical location of the mobile device	The Lyft app performs this limitation by determining the location of the device associated with the account or identity data described above. For example, the passenger's Lyft app installed determines the passenger's location and displays it on the map in the Lyft app. Similarly, the driver's mobile phone with the Lyft Driver app installed determines the driver's location and displays it on the map in the Lyft Driver app. The rider's location comprises
	geographical coordinates or geotagged/geocoded/georeferenced information related to a rider's geographical location.



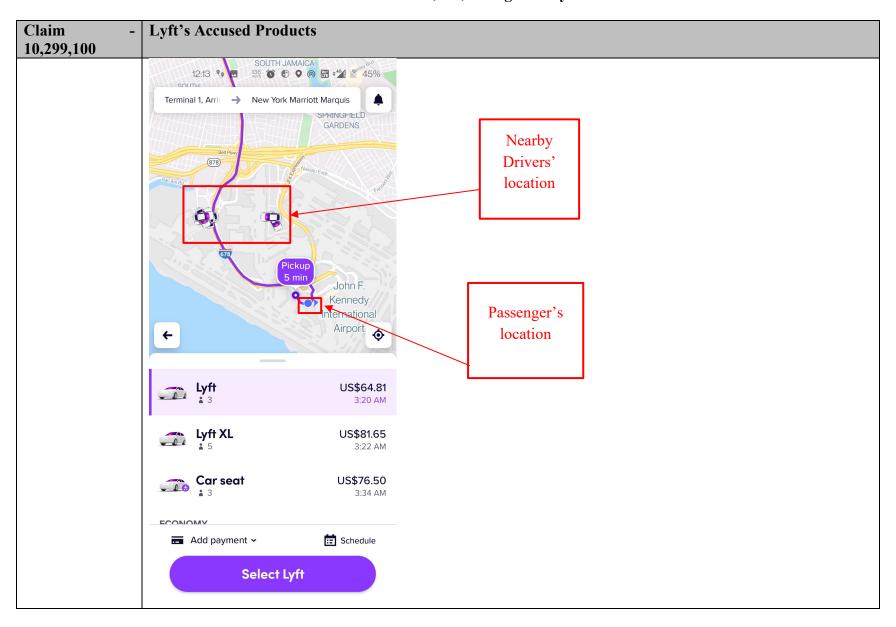


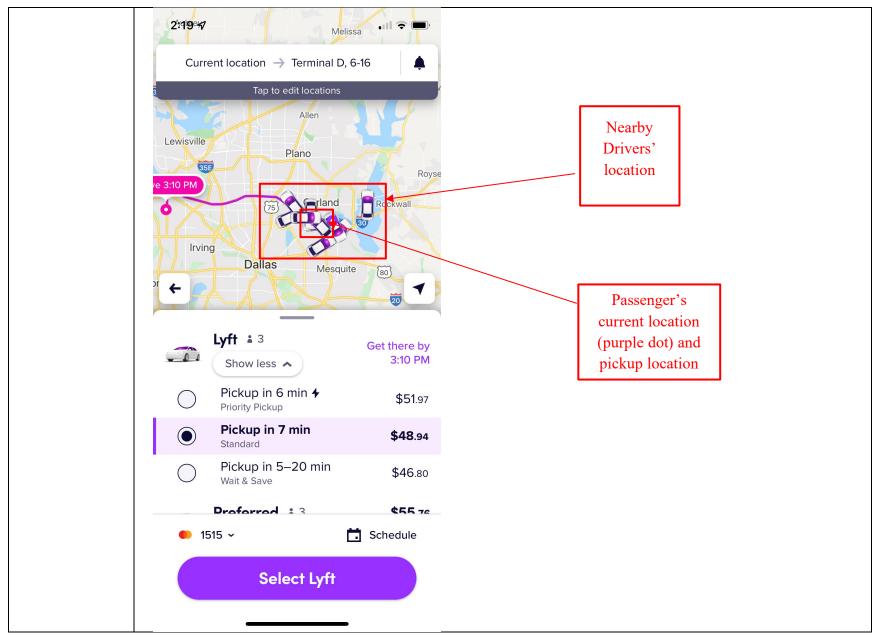


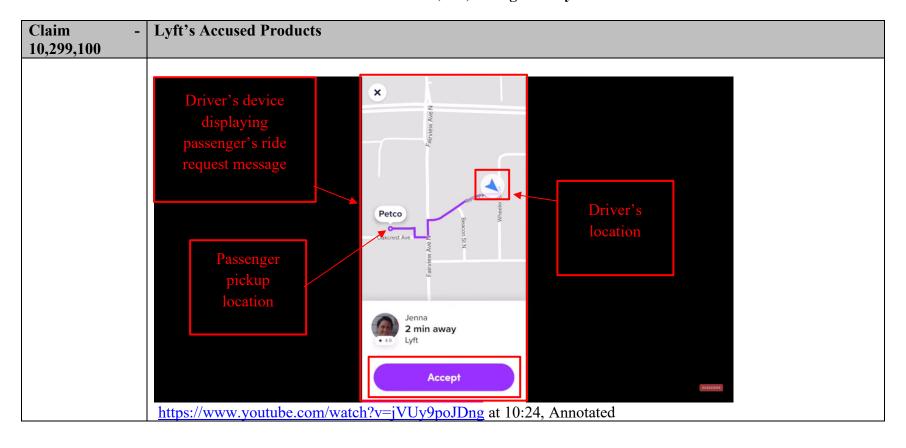


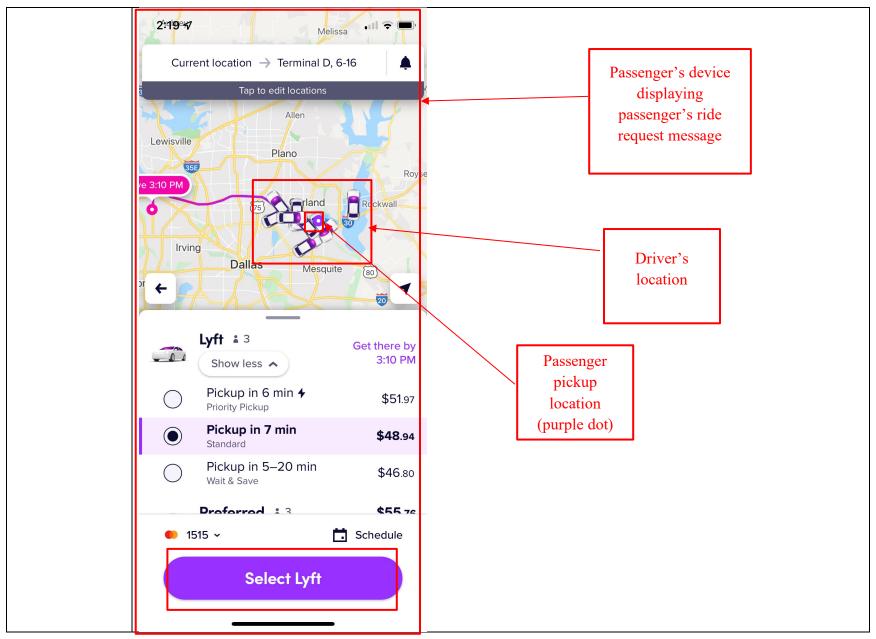
Claim - 10,299,100	Lyft's Accused Products
	Provided certain conditions are met, users of the Rider and Driver Apps can share their location with other users of Driver and Rider Apps as well as additional contacts, friends, and family. Lyft encourages and instructs users of the Rider and Driver Apps to configure their phones to share their locations. The Driver and Rider Apps are pre-configured to show the location of riders and drivers and to update the locations continuously. For example, the Rider App provides rider locations to Lyft Servers in the forms of pickup locations and current locations and Lyft Servers transmit these locations to Driver Apps with ride requests and trip details. The Rider App can update the pickup locations and current locations and these location updates are similarly transmitted to Lyft Servers and Driver Apps. In another example, the Driver App provides driver locations to Lyft Servers immediately during sign up or log in to the Driver App and continuously provides updates to the Lyft Servers before, during, and after rides. The Rider App can show the location of drivers before requesting a ride, after requesting a ride, after being matched with a particular driver, during the approach of the driver, and during the ride until the completion of the ride. In other circumstances, Rider and Driver Apps are configured by Lyft to permit users to share their locations with others by specifying contacts, friends, family members. In some instances, Lyft Servers create a link for distribution to others for access to maps containing shared locations from Lyft Servers. These shared locations permit others to track the locations of riders and drivers during rides provided by Lyft. Location sharing in Lyft's products also enables features to view and share trip progress and to track locations and computed routes. These features are built in to the Rider and Driver Apps and serviced by Lyft Servers. Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement the
1[D]. receiving, from a server, mapping data including a map	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving, from a server, mapping data including a map and coordinate translation data correlating coordinates of positions on the map with corresponding coordinates of geographical locations.

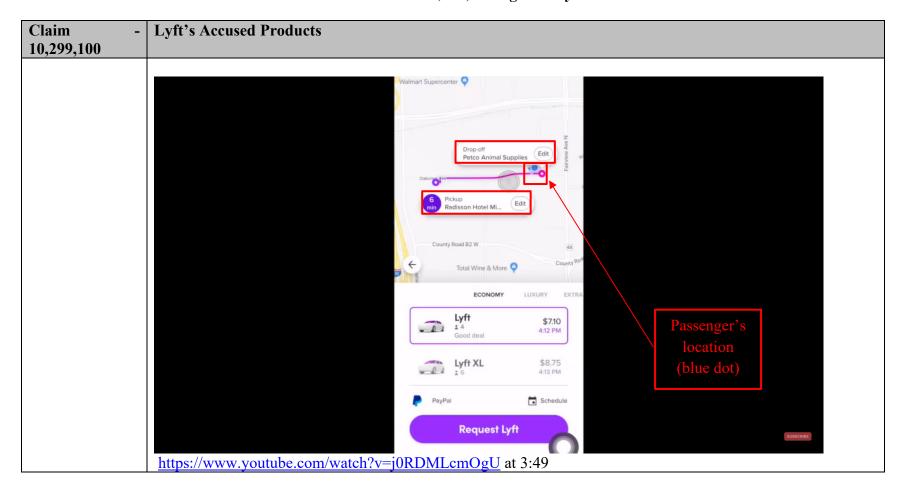
Claim -	Lyft's Accused Products
10,299,100	
and coordinate	
translation data	
correlating	
coordinates of	The Lyft app performs this limitation because it receives maps and/or map tiles from a server for displaying a map
positions on the	in the Lyft app display. The Lyft app also receives data for correlating map coordinates to geographical locations.
map with	For example, the Lyft server transmits the calculated location coordinates of the passenger and nearby drivers to
corresponding	the passenger's device and loads them on the map. Further, the location coordinates of the driver and the passenger
coordinates of	(pickup location) are transmitted to the driver's device during the ride request from the passenger. Once the ride
geographical	is accepted and the passenger is picked up by the driver, the destination address of the passenger is also loaded on
locations	the map in the Lyft Driver app on the driver's device.



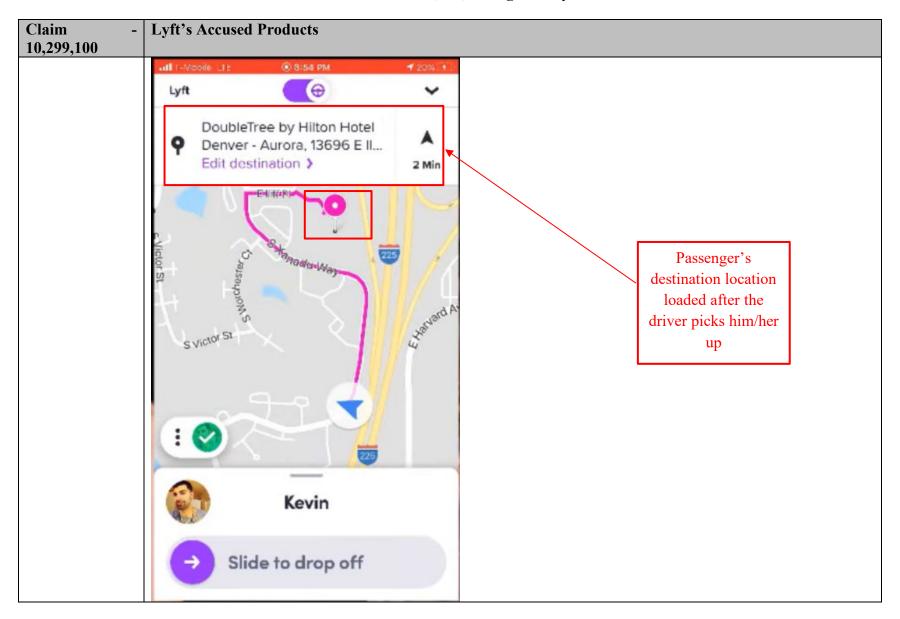








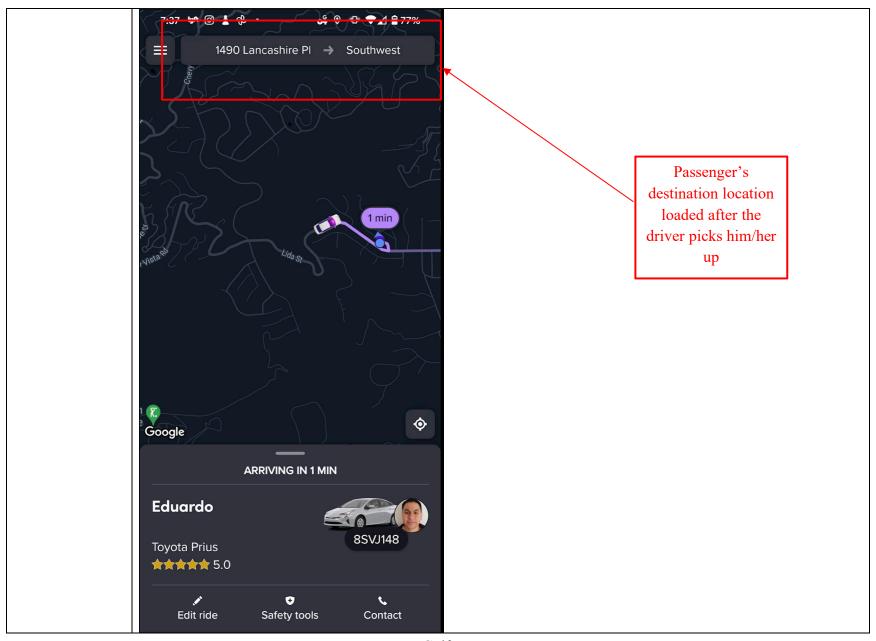




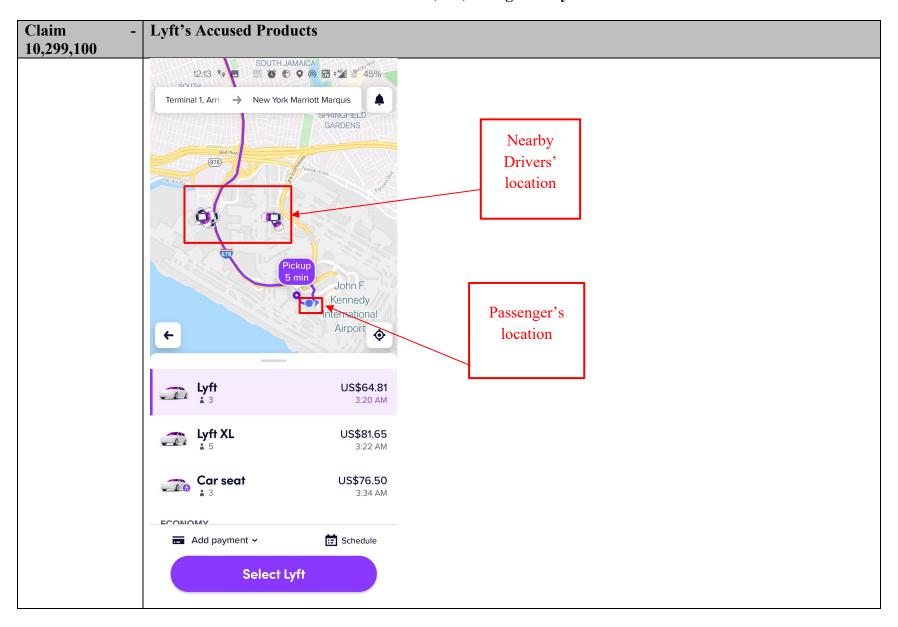
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 770 of 1092

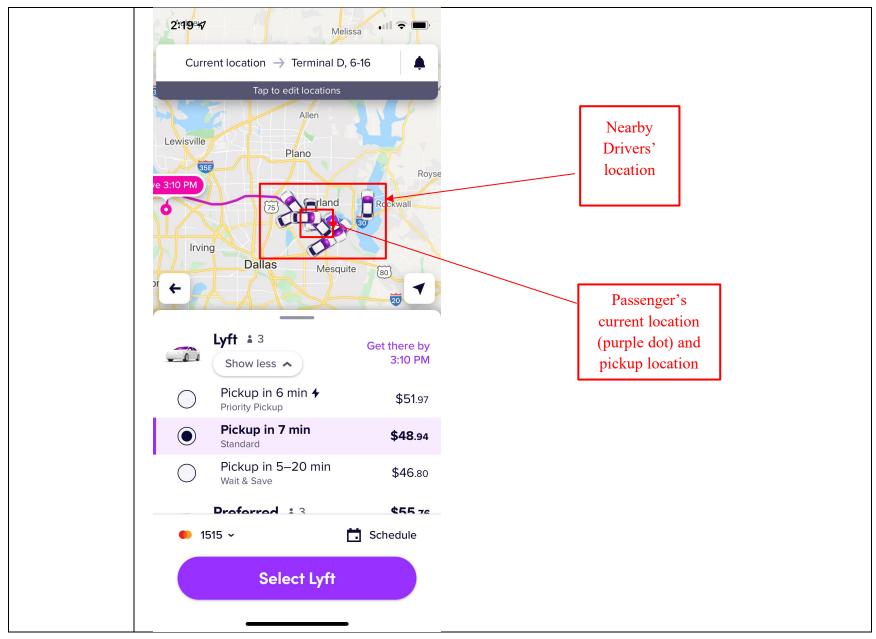
RESTRICTED CONFIDENTIAL SOURCE CODE

Claim -	Lyft's Accused Products
10,299,100	
	https://www.youtube.com/watch?v=b31WorLlcqE at 9:40

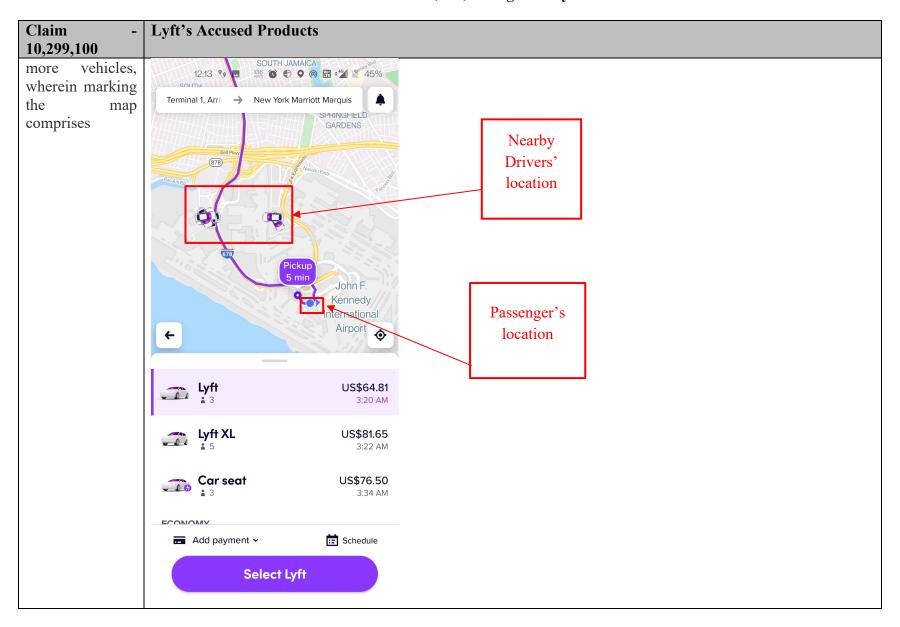


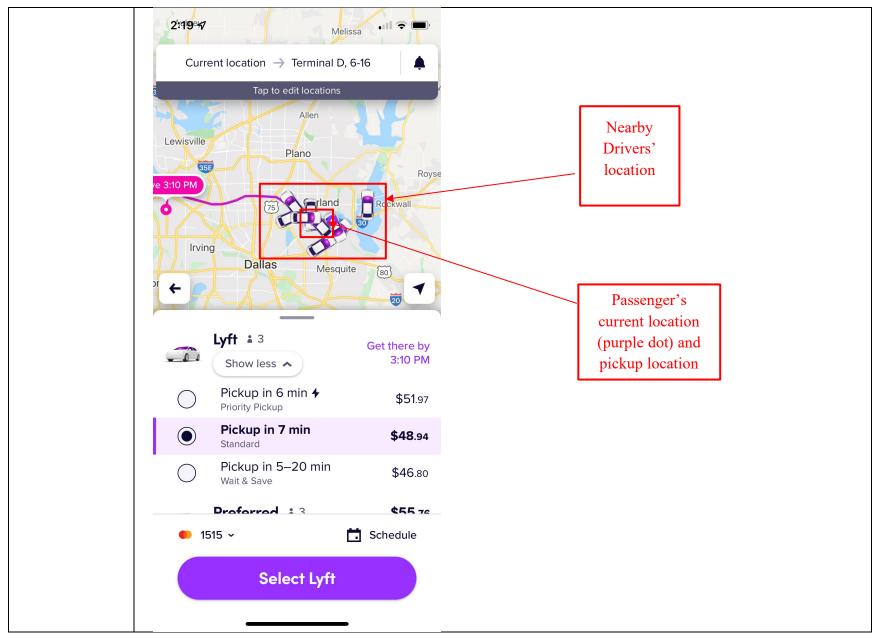
Claim - 10,299,100	Lyft's Accused Products
	See also 1[C].
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[E]. receiving, from a server, location data indicating vehicle locations of one or more	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving, from a server, location data indicating vehicle locations of one or more vehicles.
vehicles	The Lyft app performs this limitation because it receives vehicle location data from a server and that vehicle location data indicates the locations of drivers/vehicles. For example, the Lyft server transmits the calculated location coordinates of the passenger and nearby drivers ("location data indicating vehicle locations of one or more vehicles") to the passenger's device and loads them on the map in the Lyft app on the passenger's device.



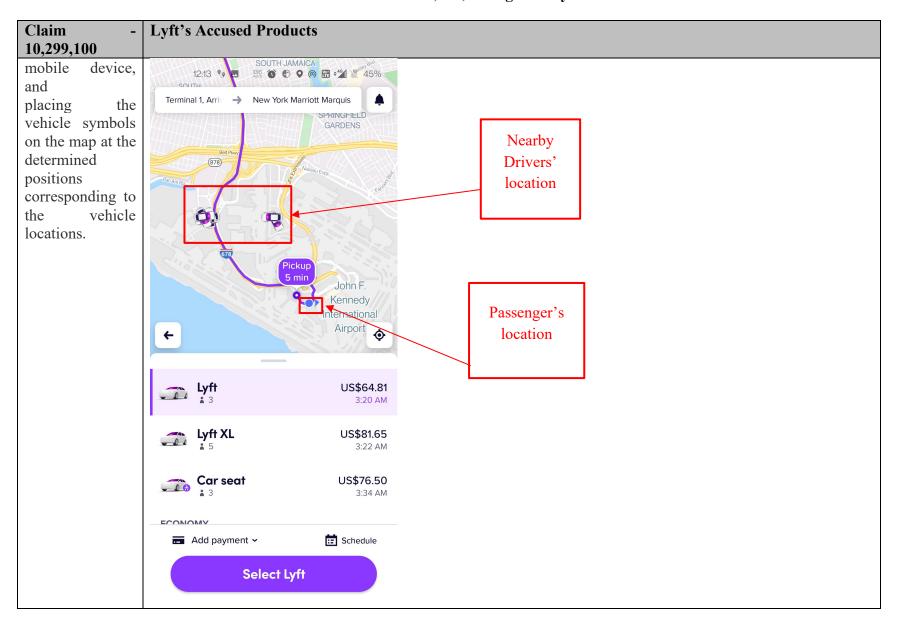


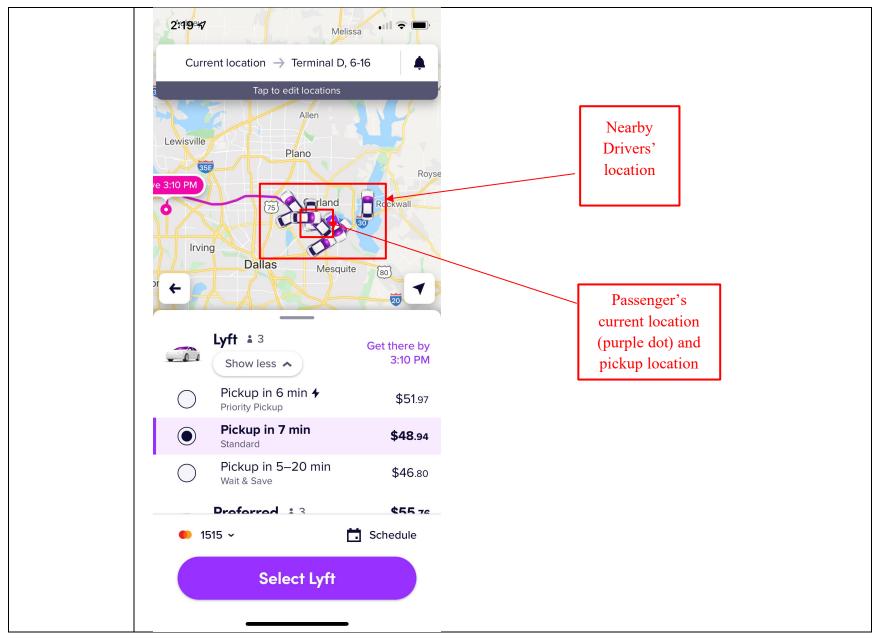
Claim -	Lyft's Accused Products
10,299,100	
	See also 1[C].
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[F]. marking the map with a plurality of symbols comprising: a participant symbol	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: marking the map with a plurality of symbols comprising: a participant symbol corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to the respective vehicle locations of the one or more vehicles.
corresponding to the device location, one or more facility symbols corresponding to respective facility locations of one or more facilities, and one or more vehicle symbols corresponding to the respective vehicle locations of the one or	The Lyft app performs this limitation because the Lyft app displays multiple symbols on its map, including a symbol for vehicles, facilities, businesses, landmarks, and other points of interest. For example, the map in the Lyft app on the passenger's device comprises a blue dot ("participant symbol") depicting the passenger's current location. The map also identifies a pickup location which may correspond to the current location of the rider. Further, the map also highlights locations including but not limited to airports, road names, parks, shops and railway stations ("facility symbol"). The location of the nearby drivers is highlighted on the map in the passenger's device using vehicle icons.





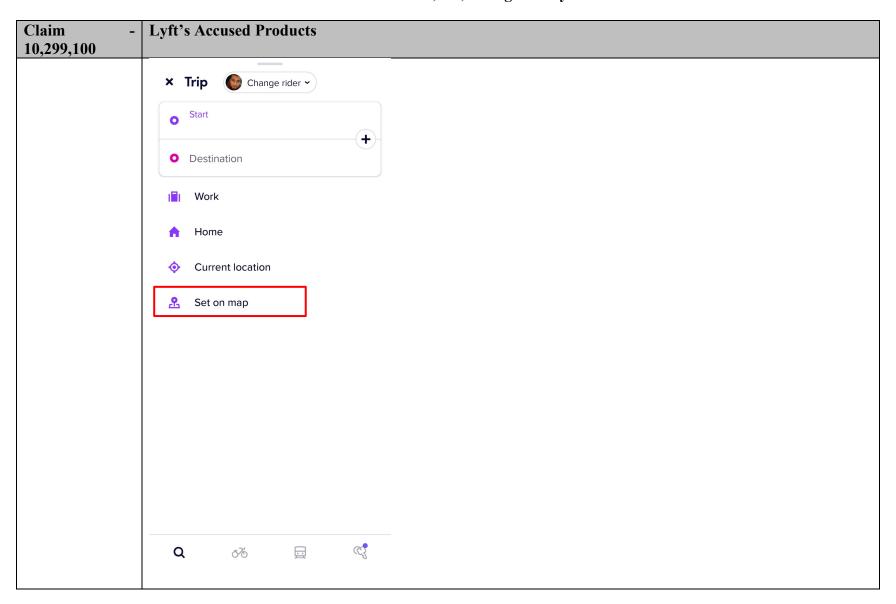
Claim - 10,299,100	Lyft's Accused Products
	See also 1[C].
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[G]. wherein marking the map comprises: determining, based at least in part on the vehicle locations	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein marking the map comprises: determining, based at least in part on the vehicle locations and the coordinate translation data, positions on the map corresponding to the vehicle locations, displaying the map on the display of the mobile device, and placing the vehicle symbols on the map at the determined positions corresponding to the vehicle locations.
and the coordinate translation data, positions on the map corresponding to the vehicle	The Lyft app performs this limitation because it determines where to place symbols on its map and places those symbols based on the data received from the server. For example, the Lyft server determines the location coordinates of the nearby drivers with respect to the passenger and transmits them to the Lyft app on the passenger's device. The location coordinates of the nearby drivers are loaded on the map and is displayed on the passenger's device. Each vehicle on the map indicates the position of a nearby driver.
locations, displaying the map on the display of the	

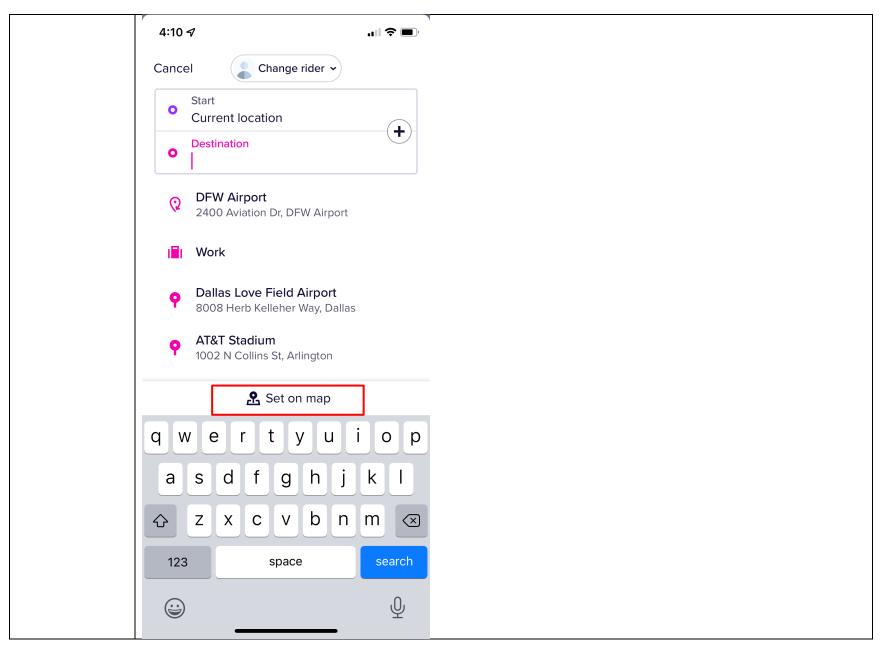


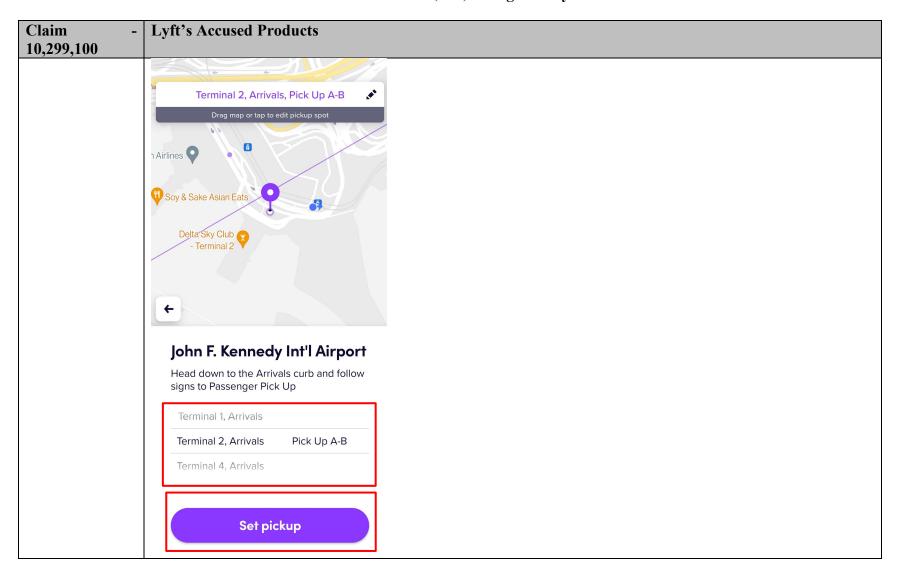


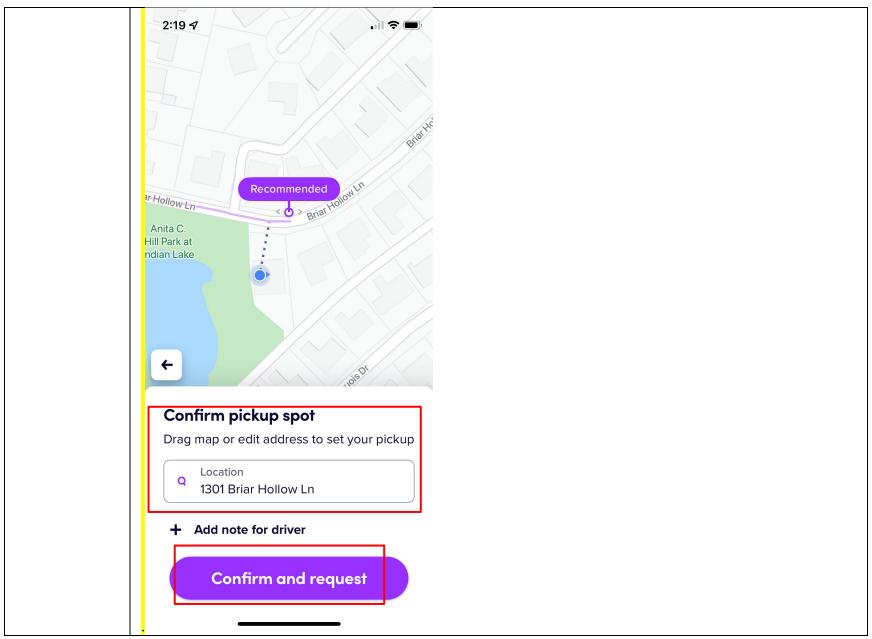
Claim -	Lyft's Accused Products
10,299,100	
	See also 1[C] and 1[F].
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[H]. responsive to user selection of a portion of the display corresponding to a position on the map, identifying a selected facility symbol based on	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: responsive to user selection of a portion of the display corresponding to a position on the map, identifying a selected facility symbol based on the selected position, comprising: initiating a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position and, based on a result of the search, identifying the selected facility symbol as the symbol located nearest to the selected position.
the selected position, comprising: initiating a search of a set of symbols including the facility symbols for a symbol located nearest to the selected position and, based on a result	The Lyft app performs this limitation because it receives user input data regarding pickups, stops or destinations entered by a user and those pickups, stops or destinations correspond to geographical locations on a map. For example, the Lyft passenger users the Lyft app for riders to select a pickup location and a destination location. The Lyft passenger can add entities of interest and select one or more entities of interest as a pickup or destination. The Lyft passenger can choose the pickup/stop/destination location by entering an address/location/shortcut or by choosing it on a map which will add/enter a symbol on the map and the passenger can change the location of the added/enter symbol to specify the location of the added/entered symbol as a pickup/stop/destination. Each of these methods will cause a symbol corresponding to the pickup/stop/destination to be added/entered on the map at the corresponding location. When the passenger completes this process, data associated with the added/entered symbol as a pickup/stop/destination is communicated to the Lyft server(s). Adding/entering the symbol for a pickup/stop/destination can occur before or during a ride. When a user enters an address, place, or shortcut, the Lyft app will search for and place a symbol at the nearest position to the address, place or shortcut.

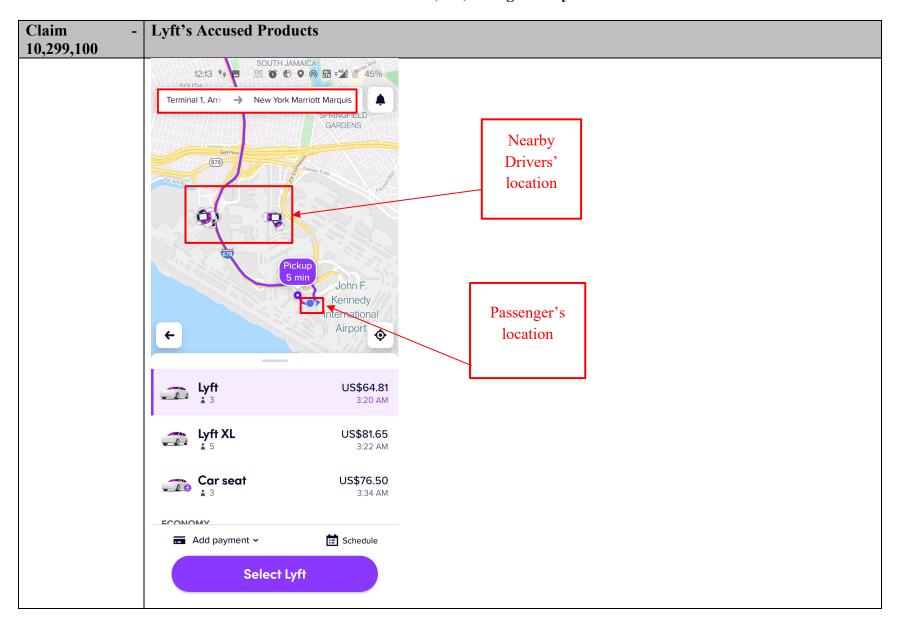
Claim -	Lyft's Accused Products
10,299,100	
identifying the	passenger selects the position on a map. For example, the passenger selects the position for a pickup such as anairport, in response to which Lyft initiates identifying the selected position and searching for all the symbols located nearby to the airport and identifying them (including but not limited to Terminal 1, Terminal 2 and

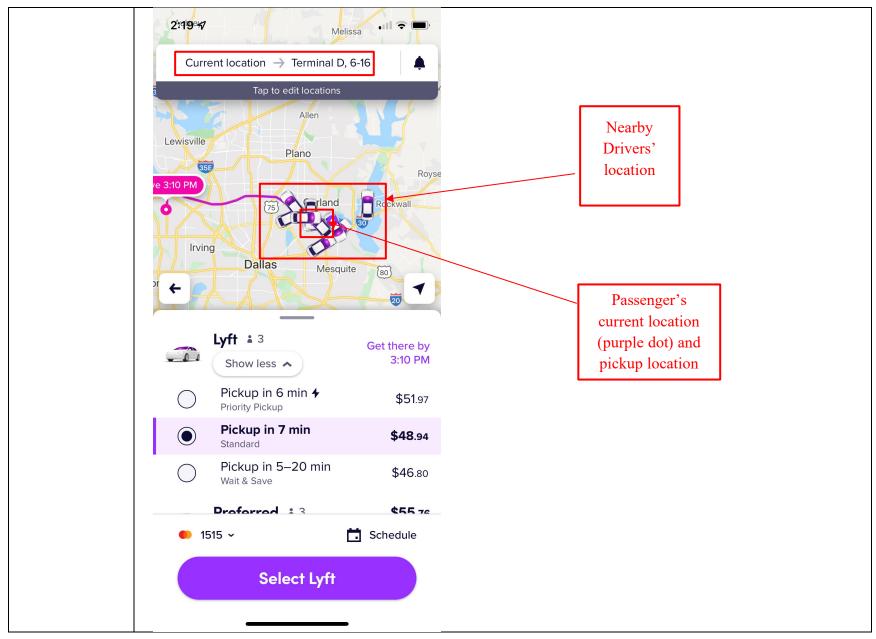




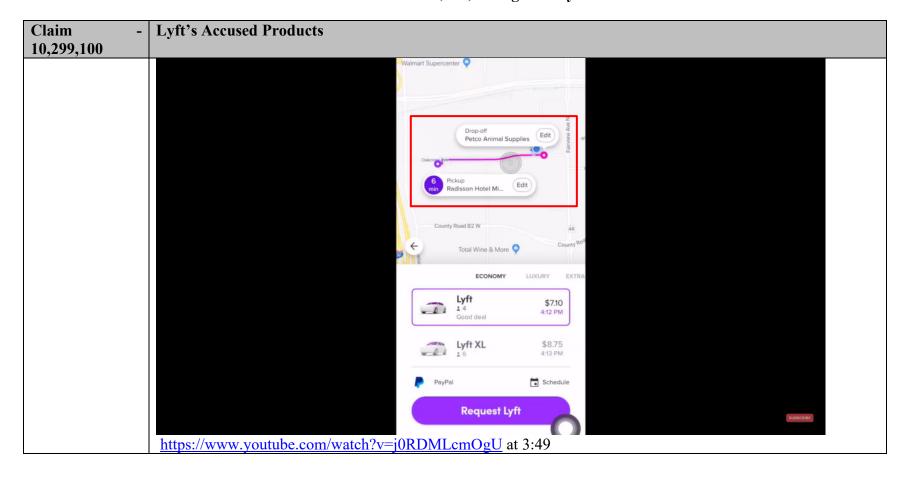


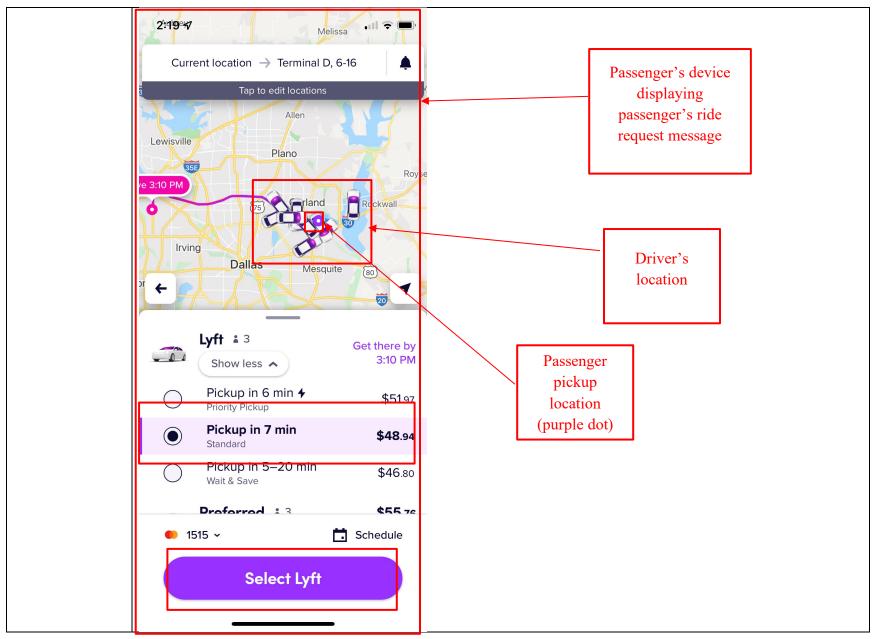


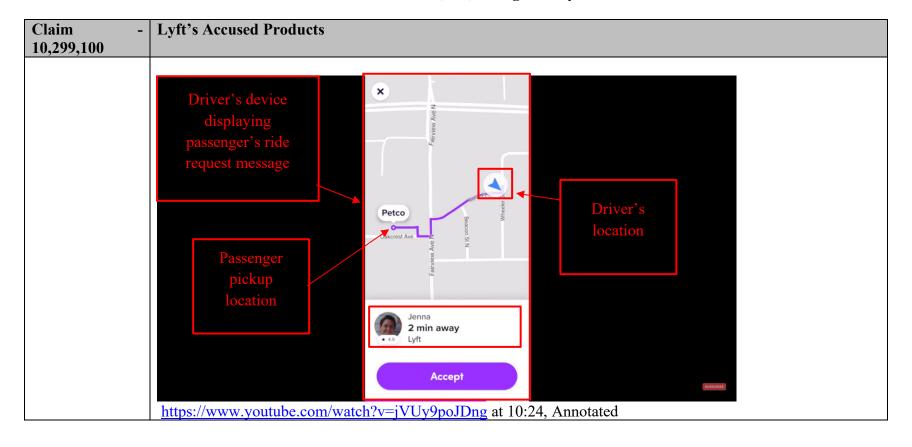


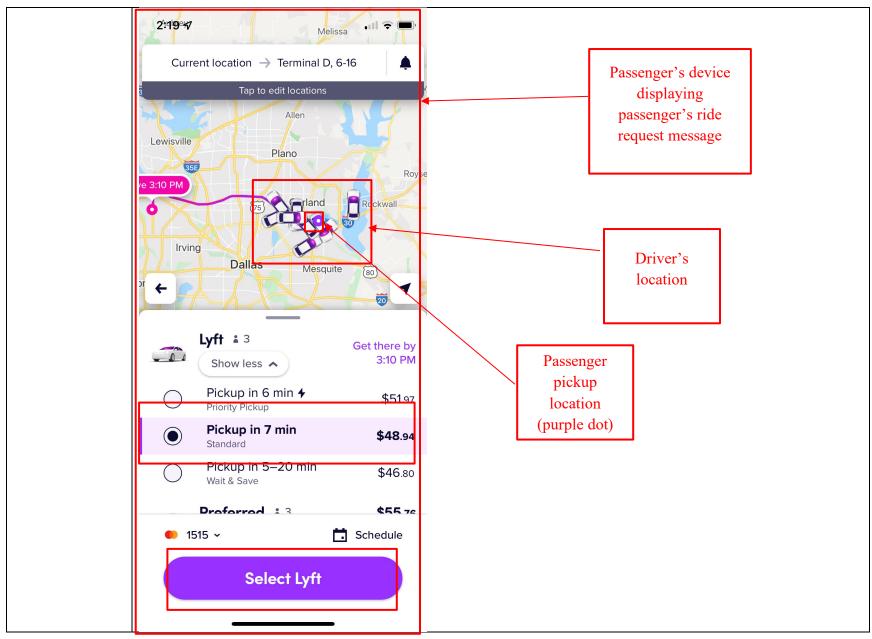


Claim - 10,299,100	Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[I]. responsive to user input, transmitting first information to a first vehicle of the one or more	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: responsive to user input, transmitting first information to a first vehicle of the one or more vehicles.
vehicles; and	The Lyft app sends information regarding the pickup/stops/destination and/or information about the passenger and this information is communicated to a driver. For example, when a passenger requests a ride by providing a pickup location (current location of passenger or any specific location) and a destination address, the request ride message comprising the pickup location and the passenger's name and photo ("first information") is communicated to nearby drivers to find the ride.

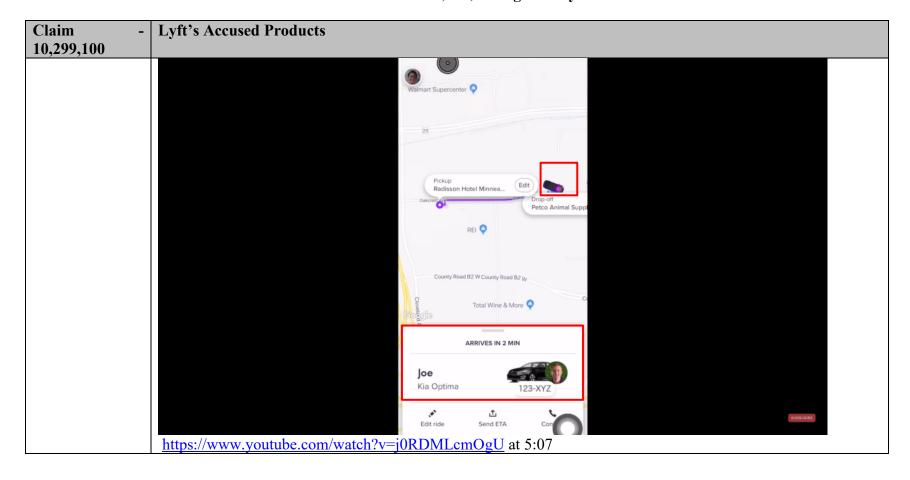


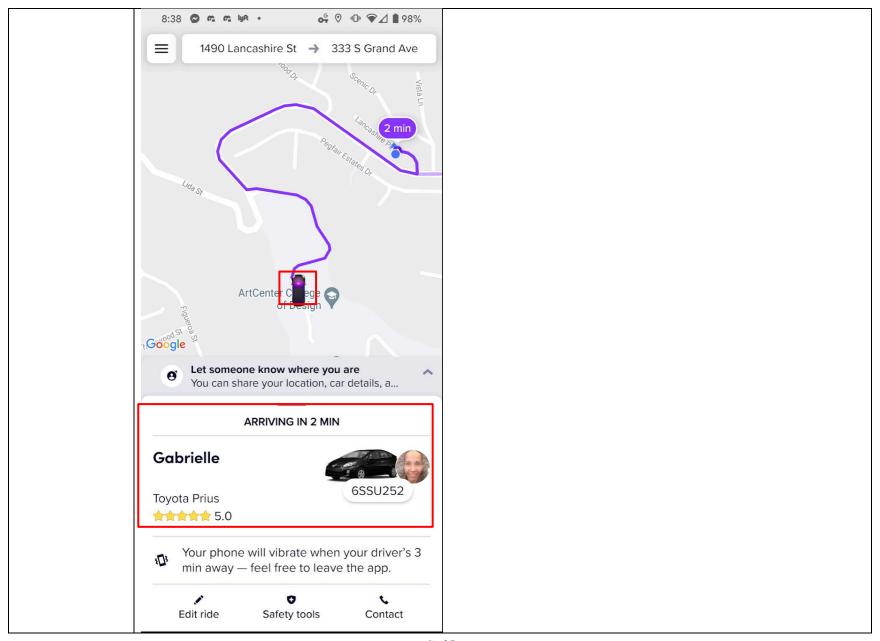




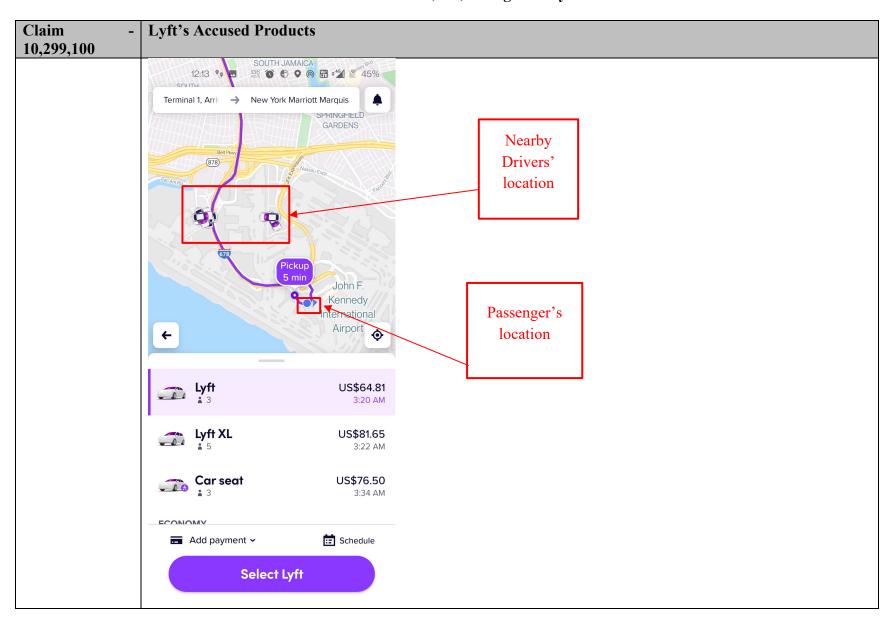


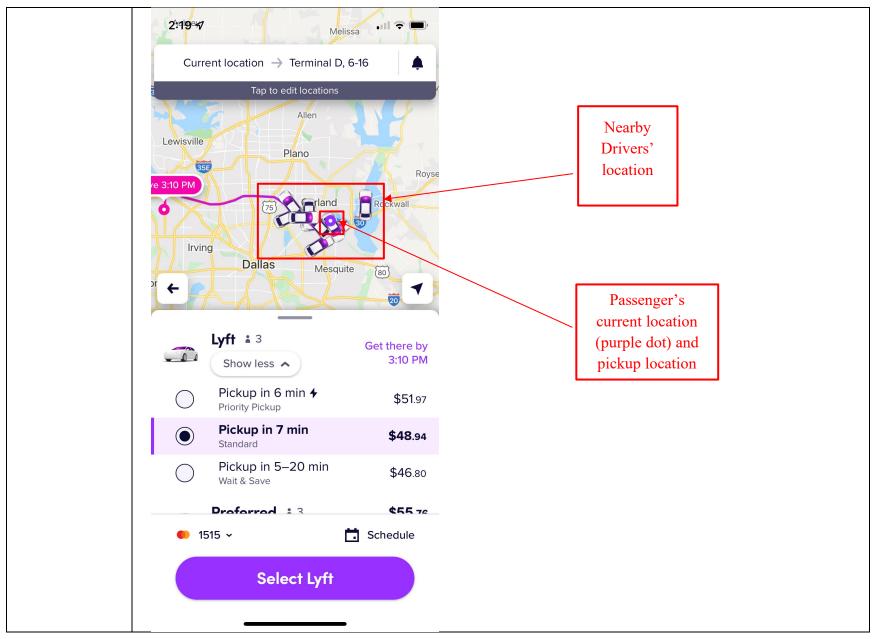
Claim - 10,299,100	Lyft's Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
1[J]. receiving second information corresponding to the first vehicle and displaying	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving second information corresponding to the first vehicle and displaying the received second information on the display of the mobile device.
the received second information on the display of the mobile device	The Lyft app for the rider can receive and display information about the driver/vehicle. For example, when a driver accepts a ride request from a passenger, the passenger via the Lyft app receives the driver's information (such as name, location, vehicle model and vehicle number).

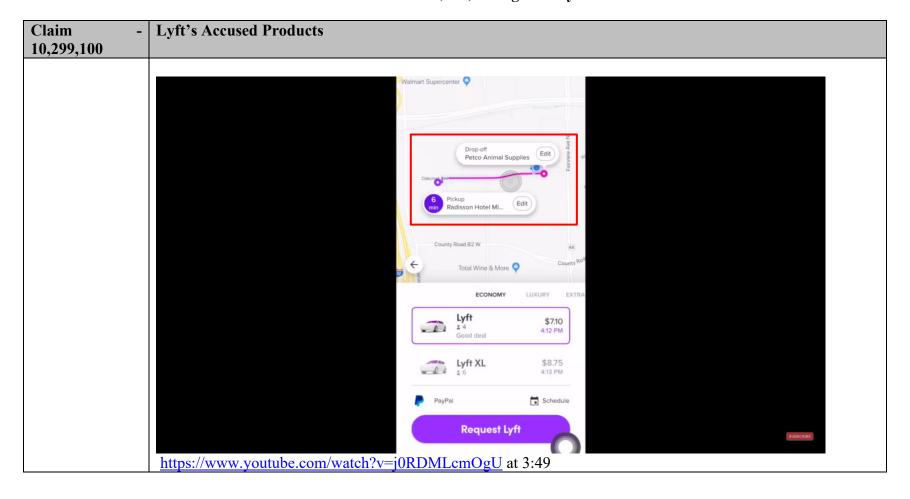


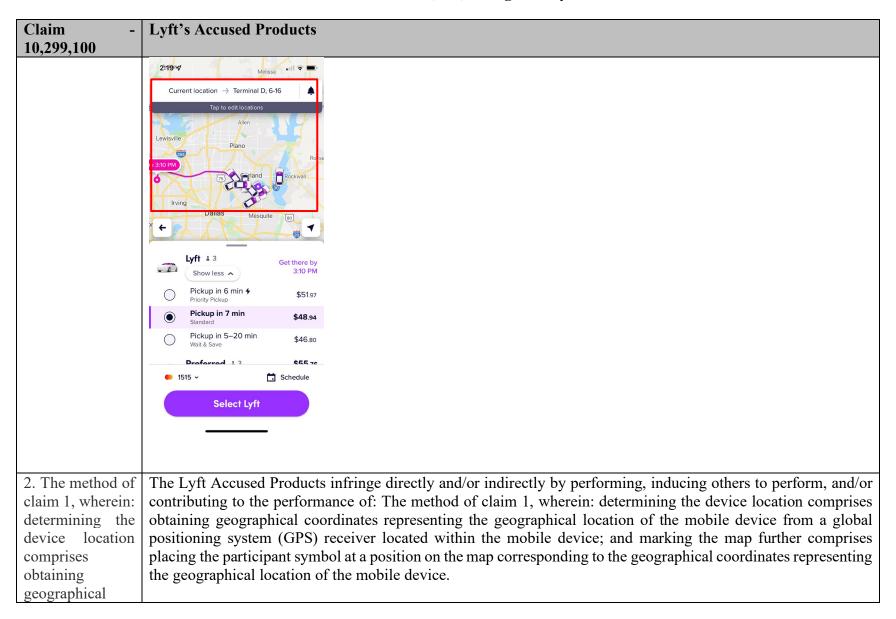


Claim - 10,299,100	Lyft's Accused Products
1[K]. wherein the mobile device does not have access to a phone number associated with a computing device	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: wherein the mobile device does not have access to a phone number associated with a computing device corresponding to the first vehicle, an Internet Protocol (IP) address associated with the computing device corresponding to the first vehicle, and an e-mail address associated with the computing device corresponding to the first vehicle.
corresponding to the first vehicle, an Internet Protocol (IP) address associated with the computing device corresponding to the first vehicle, and an e-mail address associated with the computing device corresponding to the first vehicle.	The Lyft app for the rider does not have access to the driver's phone number associated with the driver's account. The Lyft app for the rider also does not have access to the driver's email address or driver's IP address associated with the driver's device through the Lyft app. For example, the passenger does not have any information of the driver (such as email address, IP address, and contact number) and this information is not available through the Lyft app for the rider.

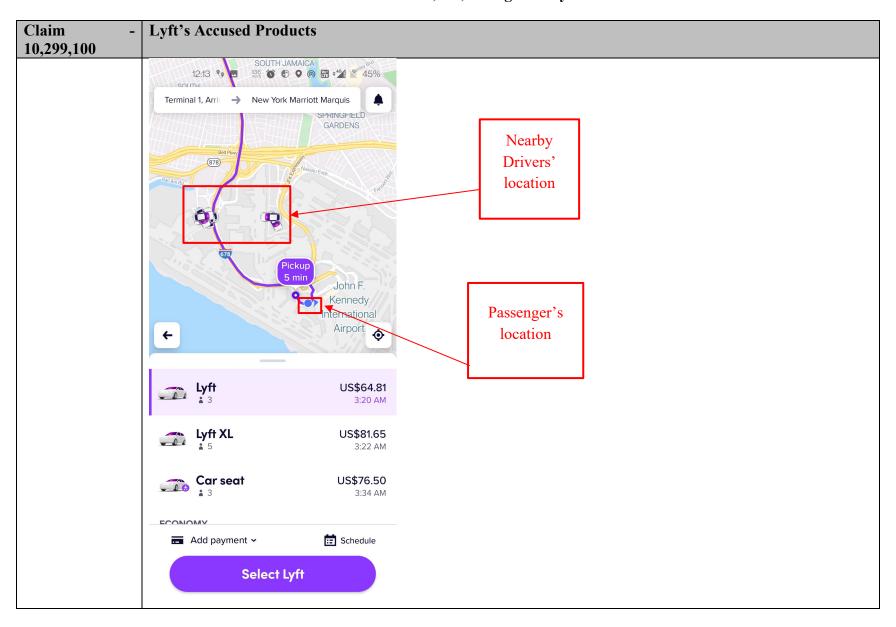


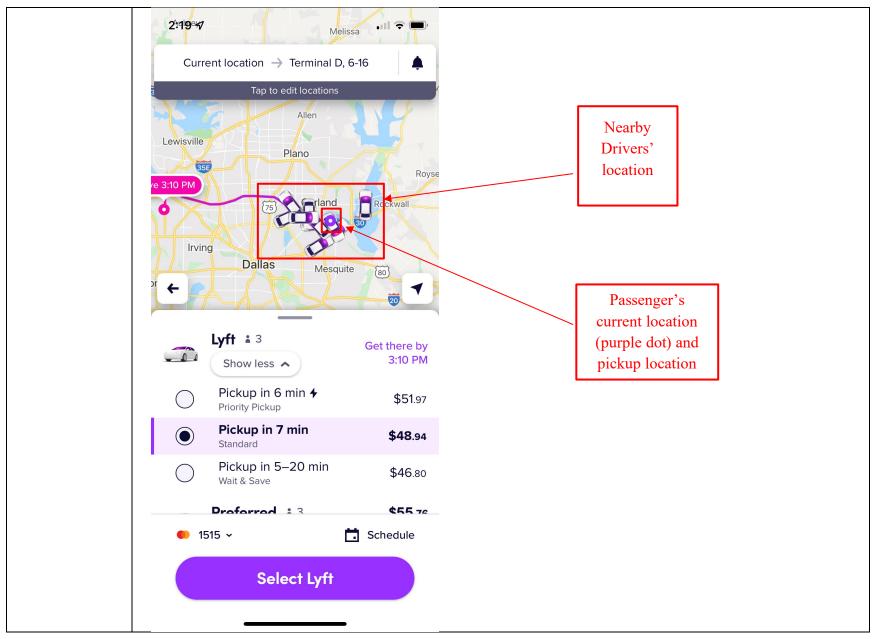




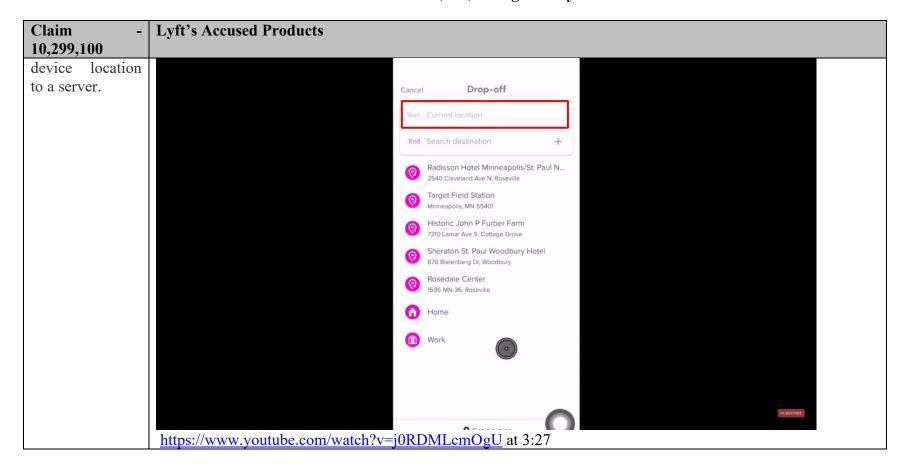


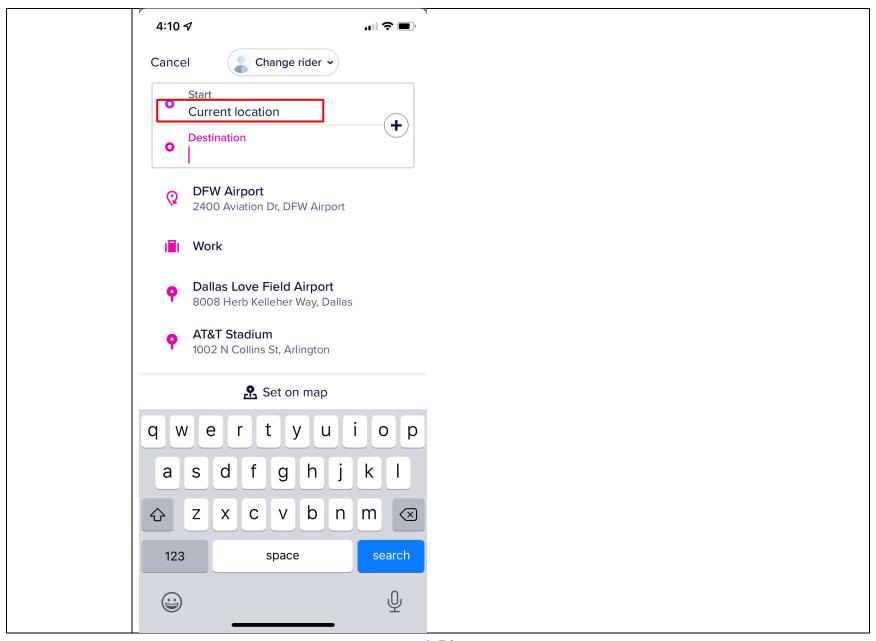
Claim -	Lyft's Accused Products
10,299,100	
coordinates	
representing the	
geographical	
location of the	See claims 1[C] and 1[F] above.
mobile device	
from a global	Further, the Lyft app meets this limitation because it can receive GPS data to determine a location and use that
positioning	location to place a symbol at the location on the map. The location is provided in coordinates.
system (GPS)	
receiver located	
within the mobile	
device; and	
marking the map	
further	
comprises	
placing the	
participant	
symbol at a	
position on the	
map	
corresponding to	
the geographical	
coordinates	
representing the	
geographical	
location of the	
mobile device.	

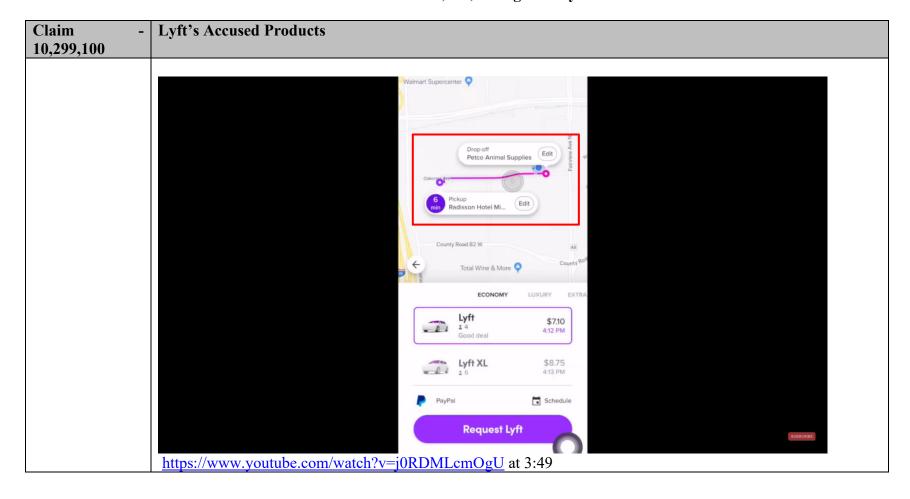


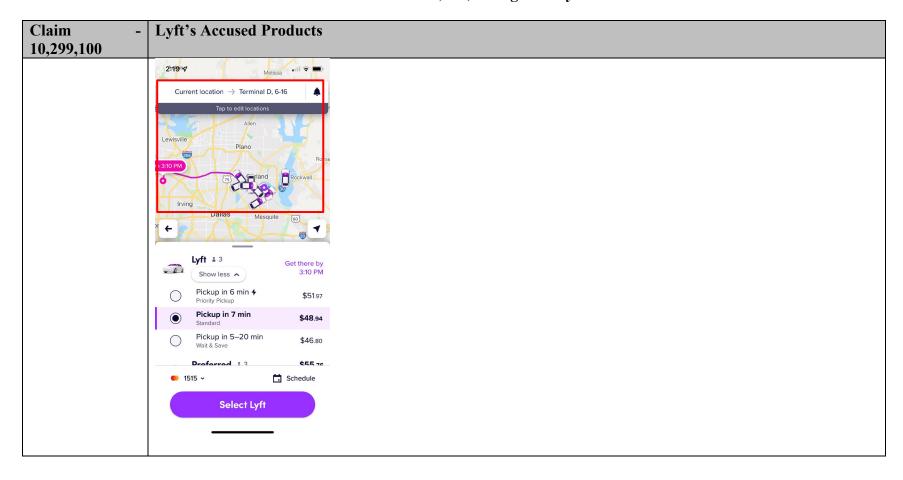


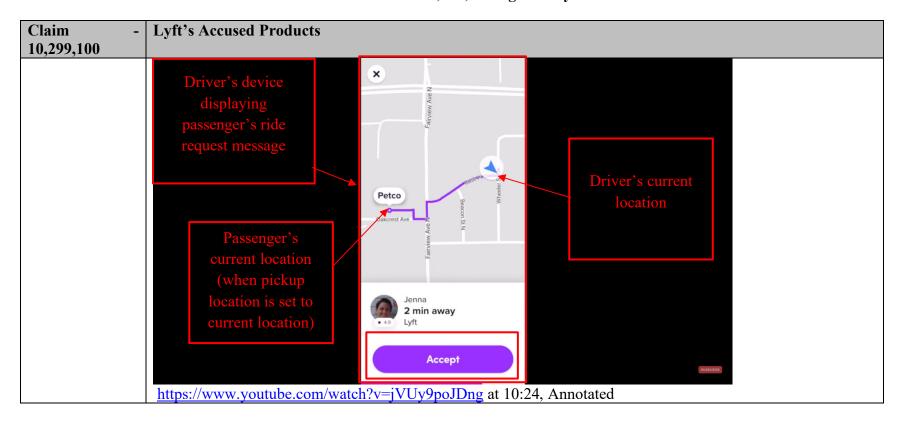
Claim - 10,299,100	Lyft's Accused Products
	You must have seen that every Android and iOS device in today's age comes with
	GPS right inside it. This is one feature that will be there in every smartphone no
	matter what the price of that device might be. And that is because of the fact that
	GPS is the most basic yet most useful feature on every smartphone.
	Just for information, the GPS stands for Global Positioning System and it provides
	accurate geolocation and time information for every equipment that is equipped
	with a GPS receiver. Now, the best example of using GPS is with services such as
	Google Maps, Apple Maps, and others where you can see where exactly you are right
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS
	satellite.
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device
3. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, wherein	contributing to the performance of: transmitting the first information to the first vehicle comprises sending data
transmitting the	comprising at least one of the identifier and the device location to a server.
first information	
to the first	
vehicle comprises	See claim 1[B] above. In addition, the Lyft app meets this limitation because it communicates the account/identity
sending data	information and location to the Lyft server. This can occur during the request or during the ride.
comprising at	information and location to the Lyrt server. This can occur during the request of during the ride.
least one of the	
identifier and the	

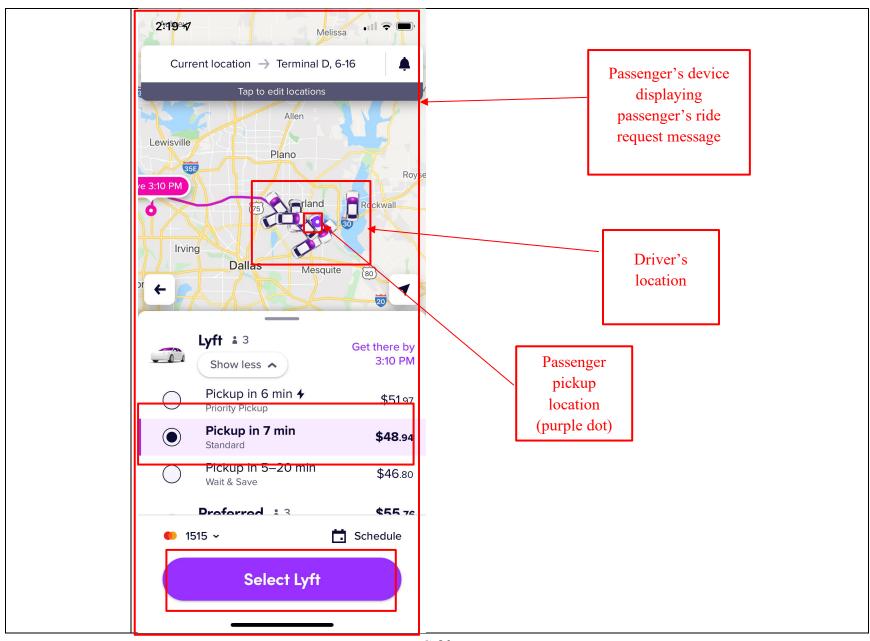




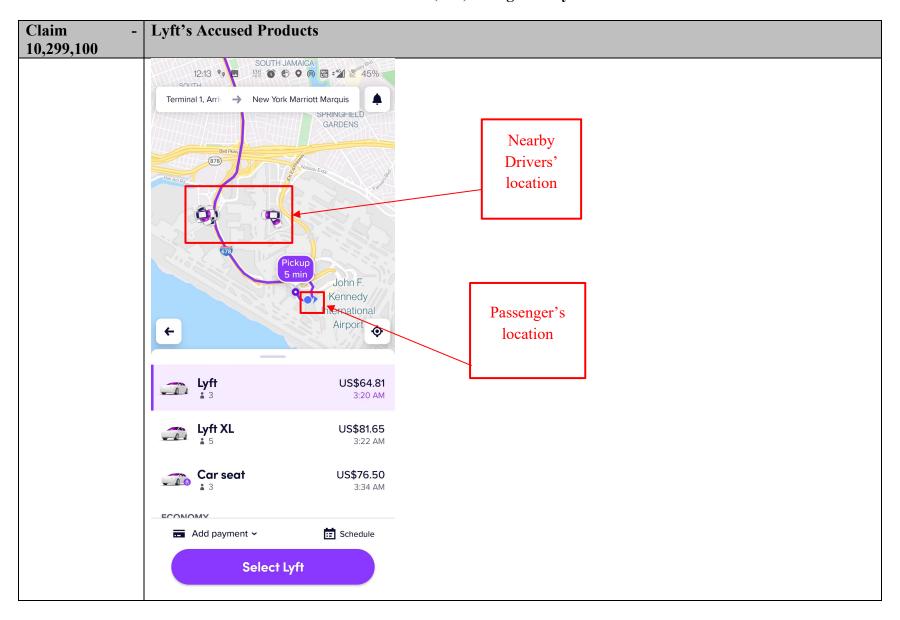


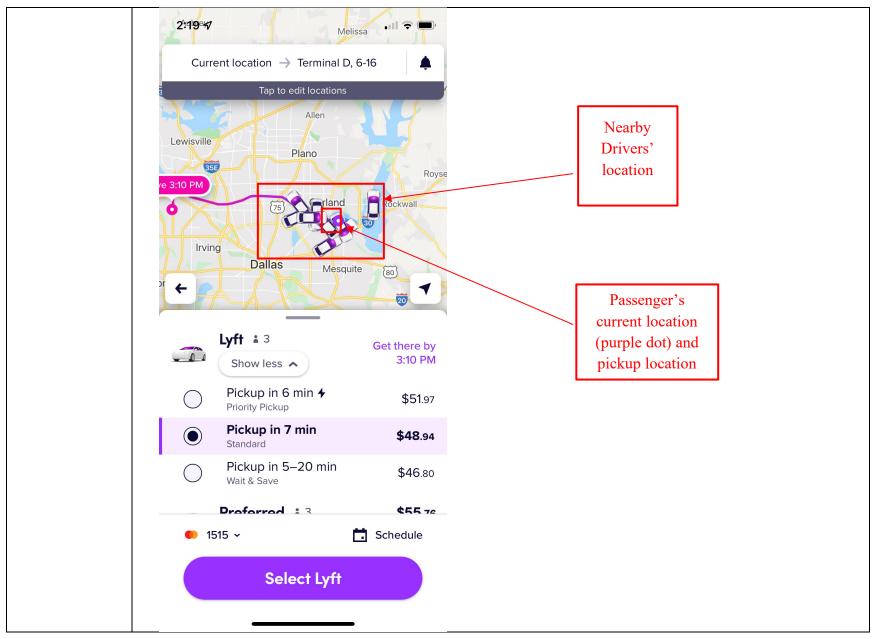




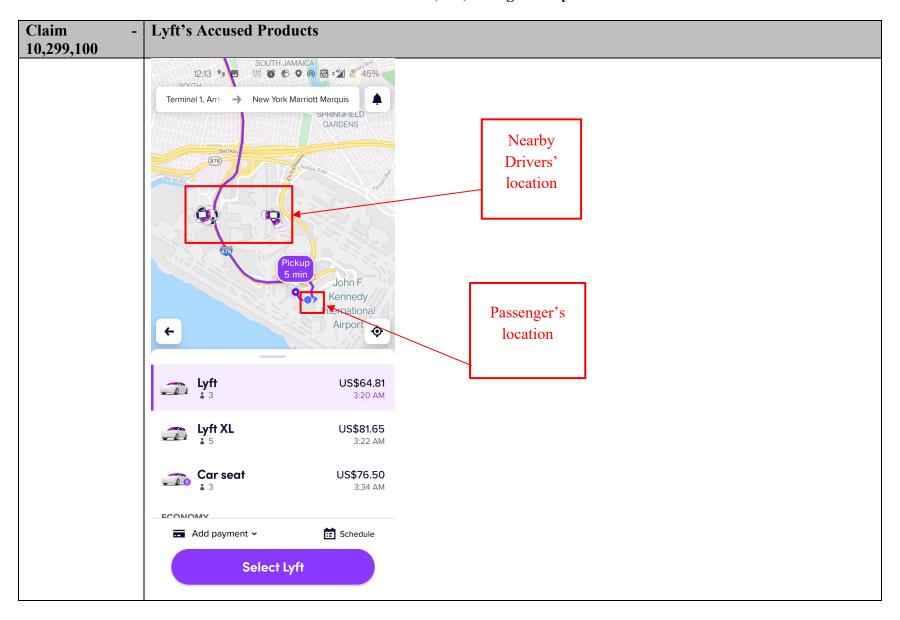


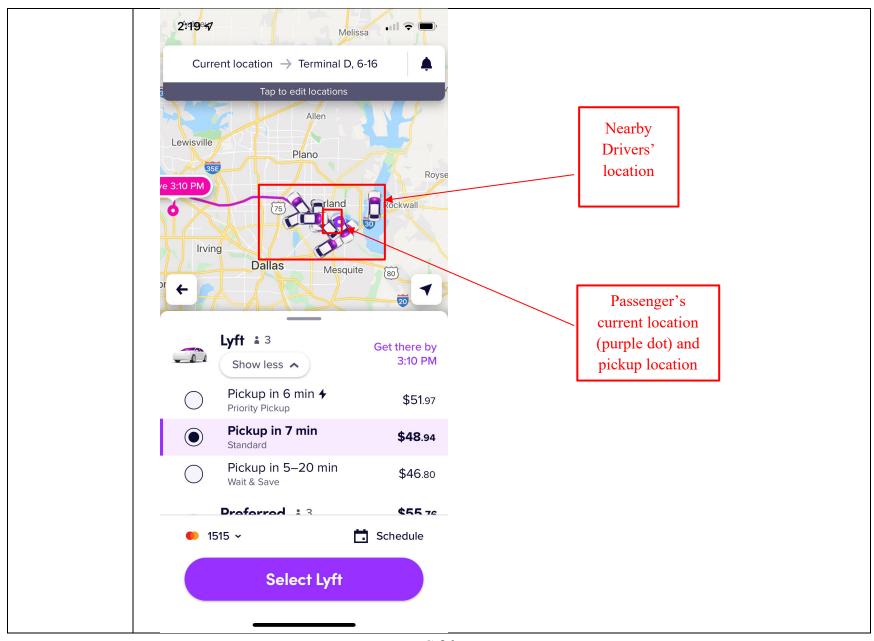
Claim - 10,299,100	Lyft's Accused Products
4. The method of claim 1, further comprising updating the map by updating at least one item	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: updating the map by updating at least one item selected from the group consisting of: a position of the participant symbol, positions of the one or more vehicle symbols, and a portion of the map displayed on the display of the mobile device.
selected from the group consisting of: a position of the participant symbol, positions of the one or more	See claim 1[F] above. In addition, the Lyft app meets this limitation because it can update the location of the rider or participant and the app can update the map. The map is updated with updated locations or new areas. For example, the Lyft app updates the map with the passenger's current location coordinates and the nearby drivers' location corresponding to their respective location coordinates. The map portion, such as the tiles or overlays (such as routes), can be updated in response to interactions with the map, change of time/orientation, zoom, pan, and/or user input or automatic input to the Lyft app from the user or Lyft server.
vehicle symbols, and a portion of the map displayed on the display of the mobile device.	



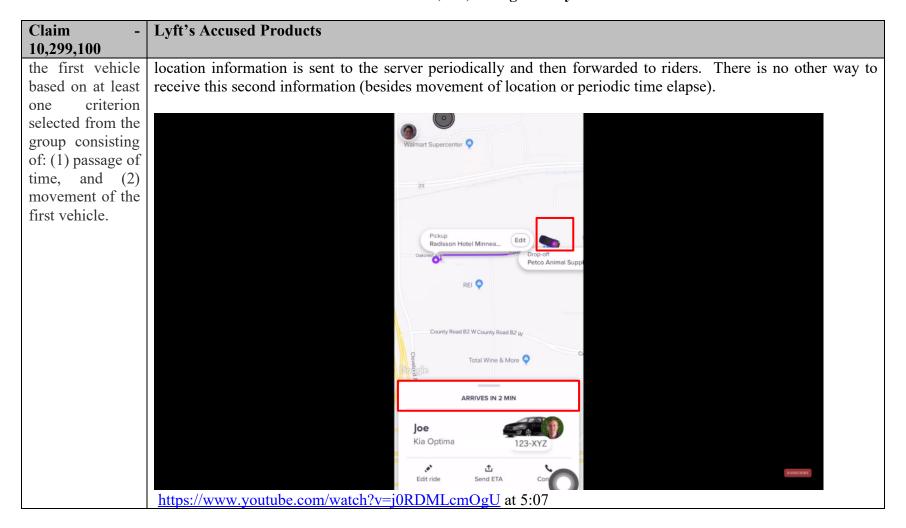


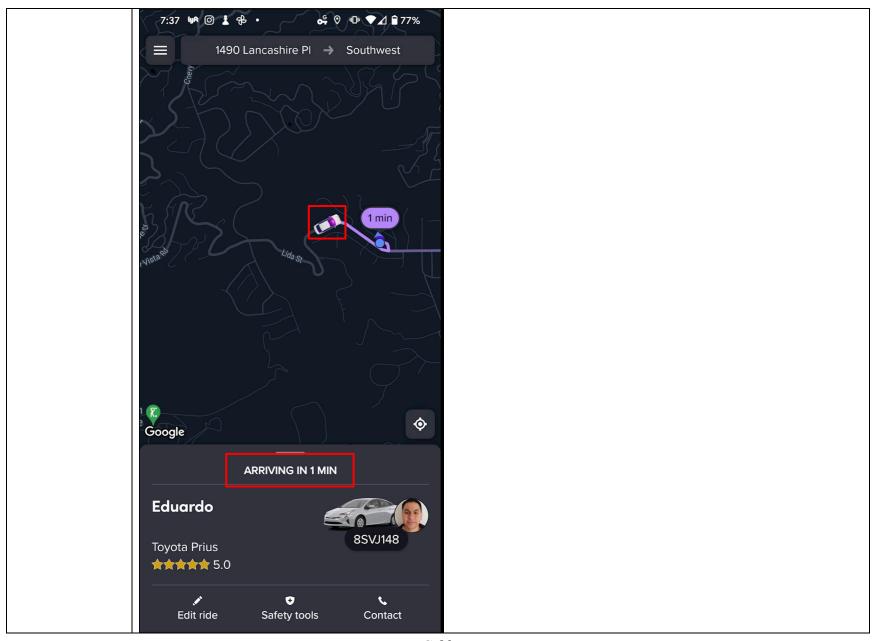
Claim - 10,299,100	Lyft's Accused Products
5. The method of claim 1, further comprising: receiving, from a server, updated respective	Every Lyft Accused Product infringes directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving, from a server, updated respective vehicle locations of the one or more vehicles; and updating, based on the received updated vehicle locations and the coordinate translation data, positions of the one or more vehicle symbols on the map.
vehicle locations of the one or more vehicles; and updating, based on the received updated vehicle locations and the coordinate translation data, positions of the one or more vehicle symbols on the map.	See claims 1[F] and 4 above. Further, the Lyft app meets this limitation because the locations can be updated based on data received from the Lyft server and the locations presented on the map can be updated based on that data from the server. For example, the Lyft server updates the map in the Lyft app with the nearby drivers' location (vehicle icons) corresponding to their respective location coordinates.





Claim - 10,299,100	Lyft's Accused Products
6. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, further	contributing to the performance of receiving, from a GPS receiver, updated device locations and updated, based
comprising:	on the received device locations and the coordinate translation data, a position of the participant symbol on the
receiving, from a	map.
GPS receiver, updated device	
locations; and	
updating, based	See Claims 1 and 2 above.
on the received	See Chamis I and 2 above.
device locations	
and the	
coordinate	
translation data,	
a position of the	
participant	
symbol on the	
map.	
7. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, wherein the received	contributing to the performance of the received second information is sent by the computing device corresponding to the first vehicle based on at least one criterion selected from the group consisting of: (1) passage of time, and
second	(2) movement of the first vehicle.
information is	(2) movement of the first vehicle.
sent by the	
computing	
device	See claim 1. In addition, the Lyft app meets this limitation because it can update the location of the vehicle
corresponding to	including location information or ETA or status information about the driver/vehicle. For example, vehicle





Claim - 10,299,100	Lyft's Accused Products
10,2//,100	
8. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 1, wherein	contributing to the performance of receiving second information which comprises one or more messages.
the received	
second	
information	
comprises one or	See claim 1[J] above.
more messages. 9. The method of	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
claim 8, wherein	contributing to the performance of the one or more messages which comprises data to facilitate the mobile device
the one or more	transmitting the first information to the first vehicle without the mobile device using the phone number, IP address,
messages	and e-mail address associated with the first vehicle.
comprise data to	
facilitate the	
mobile device transmitting the	See claim 1[K] above. The Lyft app meets this limitation because a rider is able to communicate a text message
first information	or voice message to the driver without knowing the driver's phone number, IP address and email address. This
to the first	communication is transmitted via a Lyft server.
vehicle without	, and the second
the mobile	
device using the	
phone number,	
IP address, and e- mail address	
associated with	
the first vehicle.	

Claim -	Lyft's Accused Products
10,299,100	
10. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of communicating the identifier to a server and joining a communication network
further	after the communication of the identifier to the server.
comprising:	
communicating	
the identifier to a	
server; and	See claim 1[B] above
joining a	
communication	
network after the	
communication	
of the identifier	
to the server.	
11. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 10,	contributing to the performance of the communication network comprises one or more communication devices
wherein the	corresponding, respectively, to the one or more vehicles, and wherein each of the one or more communication
communication	devices is associated with a respective identifier.
network	
comprises one or	
more	
communication	See Claims 1 and 10. The Lyft app meets this limitation because the installed Lyft apps and their respective
devices	accounts are part of the Lyft platform/network. For example, Lyft is a communication network of drivers and
corresponding,	passengers. The Lyft Driver app allows a driver to set up their account by providing information, including but
respectively, to	not limited to, name, email address, phone number, driver's license and vehicle information and associates the
the one or more	information with the respective device of the driver.
vehicles, and	
wherein each of	For example, the Lyft app also allows a passenger to set up their account by providing information including but
the one or more	not limited to name, email address and phone number and associates the information with the respective device
communication	of the passenger.
devices is	

Claim -	Lyft's Accused Products
10,299,100	
associated with a	
respective identifier.	What is Lyft?
racitifici.	
	Lyft is a platform that connects drivers with individuals and organizations that need
	rides.
	https://www.lyft.com/drive-with-lyft

Claim - 10,299,100	Lyft's Accused Products
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement
	Age requirement
	Vehicle requirements
	Driving history
	Background check
	DMV check
	Driver license, license plates, and insurance
	Community Safety Education program
	https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

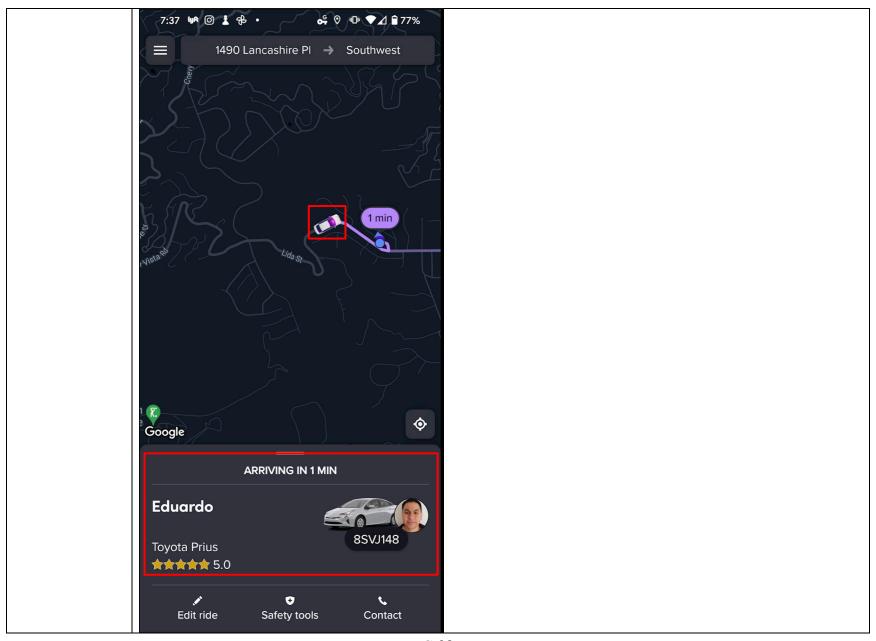
Claim - 10,299,100	Lyft's Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188

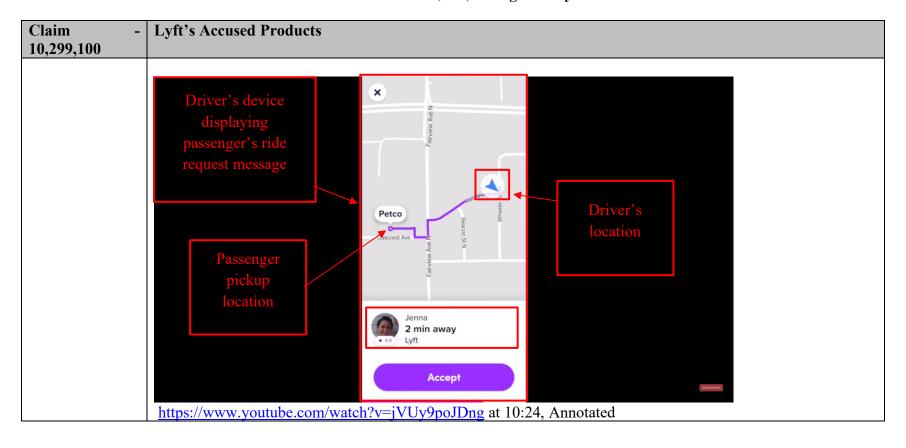
Claim - 10,299,100	Lyft's Accused Products
	Before you begin, be sure you have the following:
	Your phone number
	Your email address
	A photo of yourself
	Get started
	1. Type in your device's phone number
	To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account
	See claim 10 above.
12. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1, further comprising determining a location-	contributing to the performance of: determining a location-reporting status of the mobile device, wherein the location-reporting status is one of a reporting state and a non-reporting state, and wherein transmitting the first information to the first vehicle comprises sending the device location to a server only when the location-reporting status is in the reporting state.
reporting status	

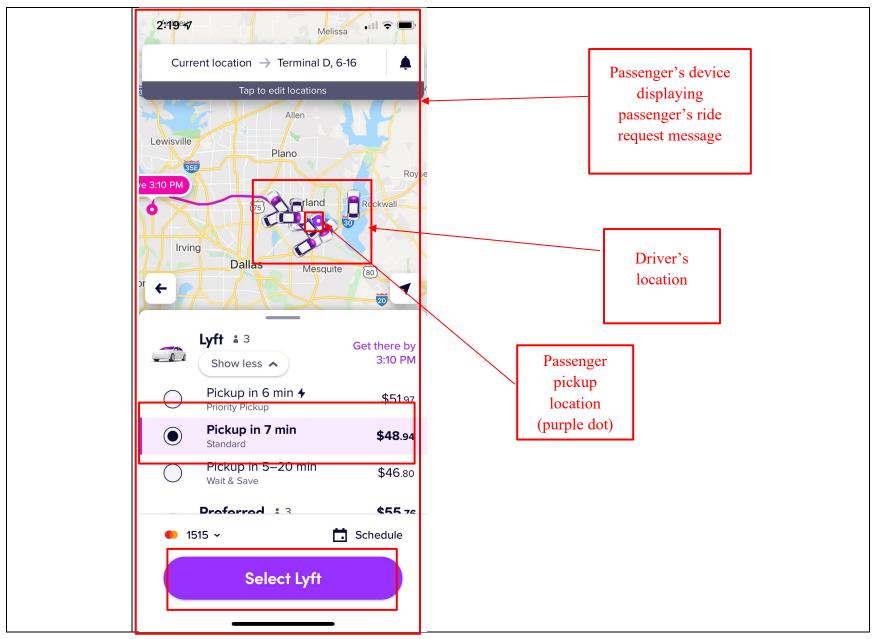
Claim -	Lyft's Accused Products
10,299,100	
of the mobile	
device, wherein	See claims 1 and 2 above. The Lyft apps perform this limitation because they determine whether locations
the location-	services/mode are enabled/disabled and if the location services/mode is enabled the Lyft app communicates
reporting status	location to the Lyft server. When location services are disabled, the Lyft app requests that the user enable
is one of a	location services to use the app and thus does not send location to the Lyft server. Locations retrieved from
reporting state	location services are sent when location services are enabled.
and a non-	
reporting state,	
and wherein	
transmitting the	
first information	
to the first	
vehicle	
comprises	
sending the	
device location	
to a server only when the	
location-	
reporting status	
is in the reporting	
state.	
13. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: transmitting the first information to the first vehicle comprises transmitting
wherein	data including the first information to a server using an Internet Protocol, wherein the second information
transmitting the	corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol, and
first information	wherein an IP address of the server is accessible to the mobile device.
to the first	
vehicle	
comprises	

Attachment C for US Patent No. 10,299,100 Against Lyft Accused Products

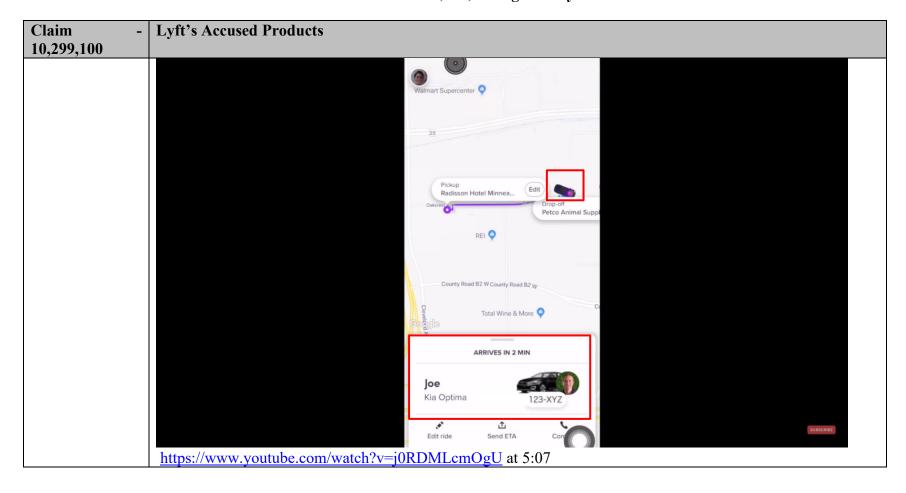
Claim **Lyft's Accused Products** 10,299,100 transmitting data See claims 1[E] and 1[I] above. The Lyft app meets this limitation because it communicates information to the Lyft server(s) via IP-based communications. For example, a passenger's Lyft app transmits the ride request including the message to the nearby drivers via the Lyft server using IP based communication which includes the IP address of first information to a server using the server. After the driver accepts the ride request, the driver's information (including but not limited to driver's name, photo, vehicle name and vehicle model) is transmitted to the passenger's Lyft app via the server using IP Internet an Protocol. based communication which includes the IP address of the server. wherein the second information corresponding to the first vehicle is transmitted by the server to the mobile device Radisson Hotel Minnea. using the Internet Protocol. and REI O wherein an IP address of the is server County Road B2 W County Road B2 W accessible to the mobile device. Total Wine & More ARRIVES IN 2 MIN loe Kia Optima https://www.youtube.com/watch?v=j0RDMLcmOgU at 5:07

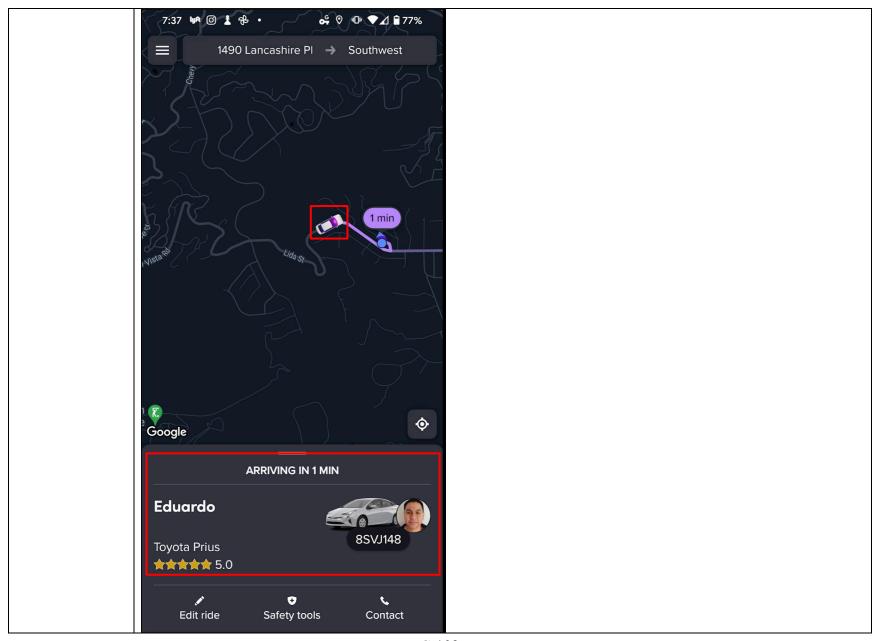






Claim - 10,299,100	Lyft's Accused Products
	Network addressing
	When a 'message' such as a file, image or video is transmitted across a network, it is first broken down into small blocks called <i>segments</i> . These are placed into containers called <i>packets</i> , typically by the Internet Protocol (IP). There are two versions of IP: version 4 and version 6.
	IP is responsible for delivering the packets from source to destination, and regardless of the version being used, packets must use some form of addressing to uniquely identify the message source and message destination.
	https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=129584&printable=1
14. The method of claim 13, wherein the data transmitted to the server further includes a second	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: the data transmitted to the server further includes a second identifier corresponding to a second network participant associated with the computing device corresponding to the first vehicle.
identifier corresponding to a second network participant associated with the computing device	See claims 1 and 13. The Lyft app meets this limitation because the communications include account/identity information. This information is included in the data communicated to the server(s). For example, when a driver accepts the ride request of the passenger, the rider's Lyft app receives the driver's information (such as name, location, vehicle model and vehicle number) ("second identifier corresponding to a second network participant") from the server and vice versa.
corresponding to the first vehicle.	



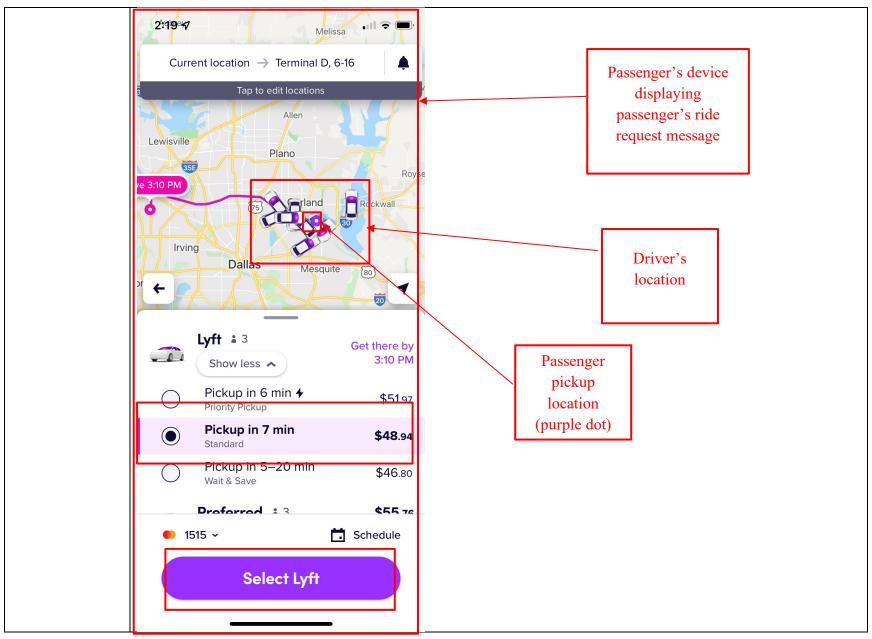


Claim - 10,299,100	Lyft's Accused Products
15. The method of claim 14, wherein: the server stores an IP address of the computing device associated	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: the server stores an IP address of the computing device associated with the second network participant identified by the second identifier; and the server transmits the first information to the computing device corresponding to the first vehicle in a message addressed to the stored IP address of the computing device corresponding to the first vehicle.
with the second network participant identified by the	See claims 1, 13, 14. The Lyft app stores the IP address of the Lyft app and communicates with the Lyft app (and accounts or identities) via IP based communication. Lyft server(s) store the IP addresses of Lyft app/accounts for use in IP based communication. For example, Lyft's server store IP addresses of each driver's device and
second identifier; and the server transmits the first information to	associates it to the respective driver's information including but not limited to as name, location, vehicle model and vehicle number. When the passenger requests a ride, the request ride message ("first information") comprising pickup location and passenger's name and photo ("identifier") is communicated to the nearby drivers using their respective IP addresses which are stored in the server.
the computing device corresponding to	
the first vehicle in a message addressed to the stored IP address	
of the computing device	
corresponding to the first vehicle.	

Claim - 10,299,100	Lyft's Accused Products
	Driver requirements
	All Lyft drivers must meet certain requirements to drive on the platform. Applicant and vehicle requirements can vary depending on your <u>City or State.</u>
	To start an application, see How to apply to become a driver for instructions.
	Skip to:
	State and local requirement Age requirement Vehicle requirements Driving history Background check DMV check Driver license, license plates, and insurance Community Safety Education program https://help.lyft.com/hc/e/articles/115012925687-Driver-requirements

Claim - 10,299,100	Lyft's Accused Products
	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top
	https://help.lyft.com/hc/e/articles/115013081188
	Applicant Waitlist
	New applicants will be automatically added to our waitlist. This makes sure there's a better balance of drivers and passengers in your region.
	The waitlist is a hold on your application request that will be removed when additional spots for new drivers open up in your city. It's hard to say exactly how long you'll be on the waitlist due to a variety of factors that affect demand in certain areas. The waitlist doesn't impact existing drivers. We'll send you a notification as soon as a spot opens up!
	As soon as you're removed from the waitlist you'll be able to complete all necessary application steps. Once your application and documents are approved, you can start driving.
	https://help.lyft.com/hc/e/articles/115013081188





Claim - 10,299,100	Lyft's Accused Products
	Network addressing
	When a 'message' such as a file, image or video is transmitted across a network, it is first broken down into small blocks called <i>segments</i> . These are placed into containers called <i>packets</i> , typically by the Internet Protocol (IP). There are two versions of IP: version 4 and version 6.
	IP is responsible for delivering the packets from source to destination, and regardless of the version being used, packets must use some form of addressing to uniquely identify the message source and message destination.
	https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=129584&printable=1
16. The method of claim 1, further comprising determining coordinates of the selected position on the map, wherein data associated with the set of symbols include coordinates of positions on the map of the symbols in the set,	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of determining coordinates of the selected position on the map, wherein data associated with the set of symbols include coordinates of positions on the map of the symbols in the set, wherein the search of the set of symbols includes a search of the coordinates of the positions of the symbols in the set for coordinates located nearest to the coordinates of the selected position, and wherein the selected facility symbol is identified as the symbol located nearest to the selected position based on a result of the search of the coordinates of the positions on the map of the symbols. See claim 1[H] above.

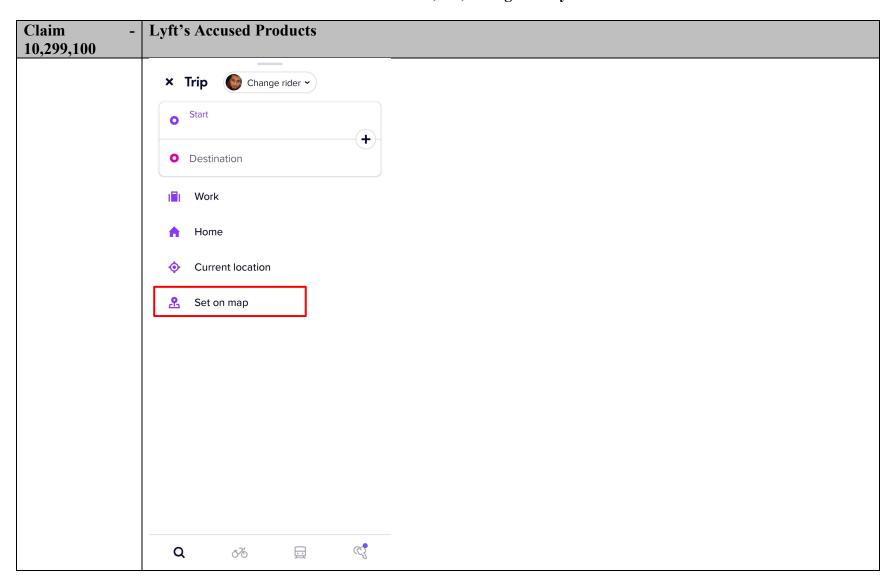
Claim -	Lyft's Accused Products
10,299,100	
wherein the	
search of the set	
of symbols	
includes a search	
of the	
coordinates of	
the positions of	
the symbols in	
the set for	
coordinates	
located nearest to	
the coordinates	
of the selected	
position, and	
wherein the	
selected facility	
symbol is	
identified as the	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates	
of the positions	
on the map of the	
symbols.	
17. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of determining coordinates of the selected portion of the display, wherein data
further	associated with he set of symbols include coordinates of portions of the display corresponding to the symbols in

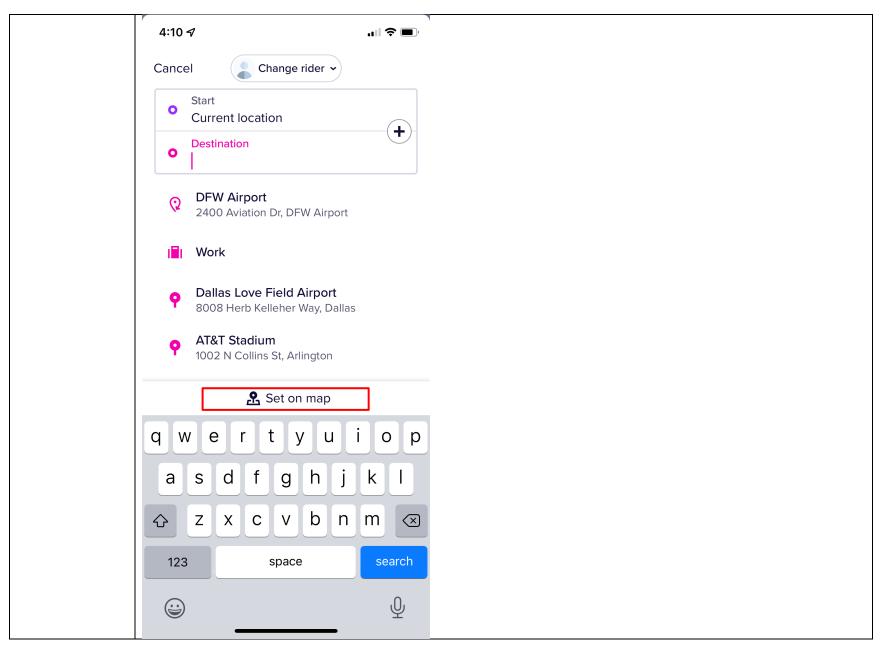
Claim - 10,299,100	Lyft's Accused Products
comprising	the set, wherein the search of the set of symbols includes a search of the coordinates of the portions of the display
determining	corresponding to the symbols in the set for coordinates located nearest to the coordinates of the selected portion
coordinates of	of the display, and wherein the selected facility symbol is identified as the symbol located nearest to the selected
the selected	position based on a result of the search of the coordinates of the portions of the display corresponding to the
portion of the	symbols.
display,	
wherein data	
associated with	
the set of	See claim 1[H] above.
symbols include	
coordinates of	
portions of the	
display	
corresponding to	
the symbols in	
the set, wherein	
the search of the	
set of symbols	
includes a search	
of the	
coordinates of	
the portions of	
the display	
corresponding to	
the symbols in	
the set for	
coordinates	
located nearest to	
the coordinates	
of the selected	

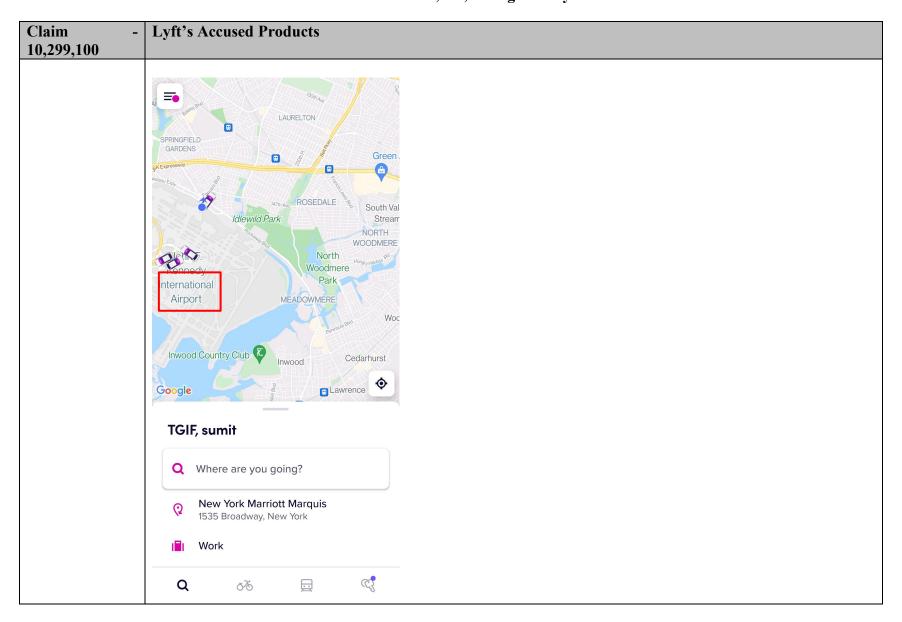
Claim -	Lyft's Accused Products
10,299,100	
portion of the	
display, and	
wherein the	
selected facility	
symbol is	
identified as the	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates	
of the portions of	
the display	
corresponding to	
the symbols.	
18. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of determining coordinates of a location represented by the selected position on
further	the map, wherein data associated with the set of symbols include coordinates of locations of entities represented
comprising	by the symbols in the set, wherein the search of the set of symbols includes a search of the coordinates of the
determining	locations of the entities represented by the symbols in the set for coordinates located nearest to the coordinates of
coordinates of a	the location represented by the selected position on the map, and wherein the selected facility symbol is identified
location	as the symbol located nearest to the selected position based on a result of the search of the coordinates of the
represented by	locations of the entities represented by the symbols.
the selected	
position on the	
map,	
wherein data	See claim 1[H] above.
associated with	
the set of	

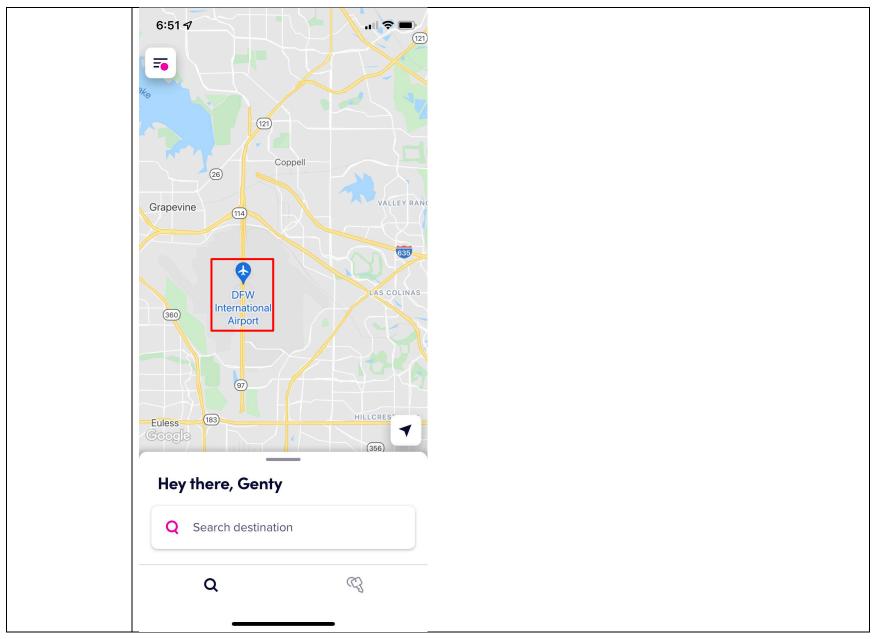
Claim -	Lyft's Accused Products
10,299,100	
symbols include	
coordinates of	
locations of	
entities	
represented by	
the symbols in	
the set,	
wherein the	
search of the set	
of symbols	
includes a search	
of the	
coordinates of	
the locations of	
the entities	
represented by	
the symbols in	
the set for	
coordinates	
located nearest to	
the coordinates	
of the location	
represented by	
the selected	
position on the	
map, and	
wherein the	
selected facility	
symbol is	
identified as the	

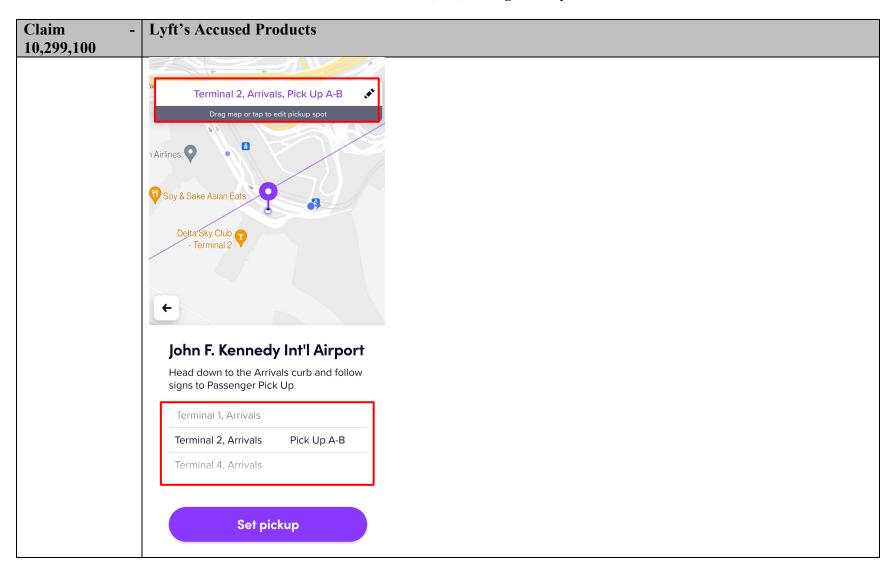
Claim -	Lyft's Accused Products
10,299,100	
symbol located	
nearest to the	
selected position	
based on a result	
of the search of	
the coordinates	
of the locations	
of the entities	
represented by	
the symbols.	
19. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 1,	contributing to the performance of: after identifying the selected facility symbol, displaying an address of the
further	facility represented by the facility symbol.
comprising:	
after identifying	
the selected	
facility symbol,	See claim 1. The Lyft apps meet this limitation because the Lyft app displays the address for selected entities on
displaying an	the display. For example, after Lyft identifies the selected facility symbol (e.g. airport), it displays the address of
address of the	the selected facility represented by the facility symbol.
facility	
represented by	
the facility	
symbol.	

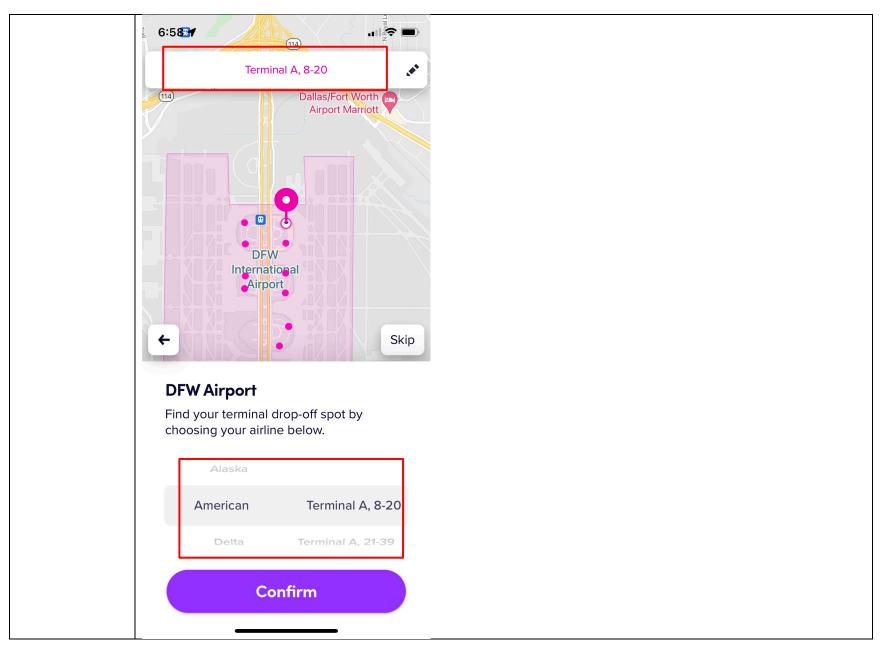




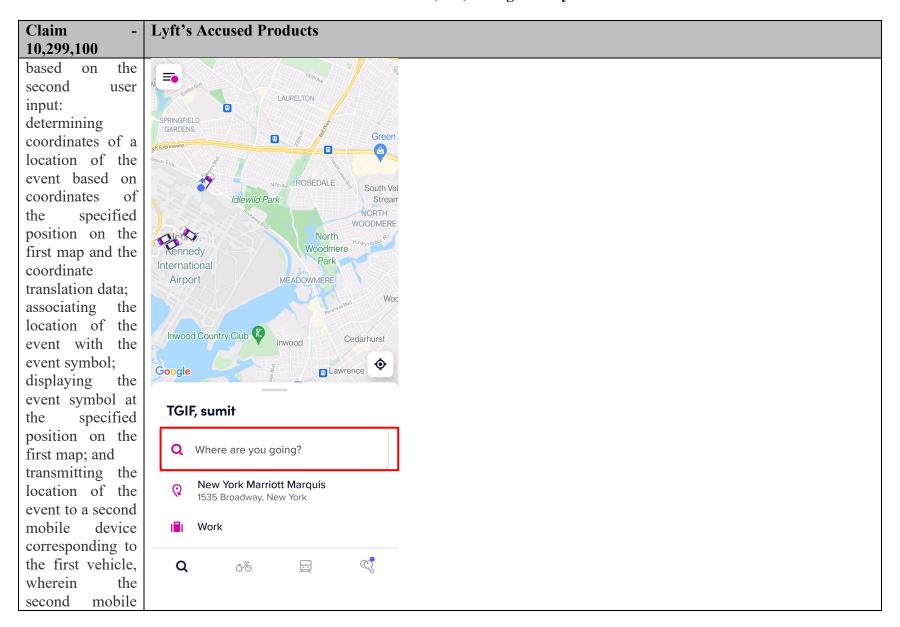


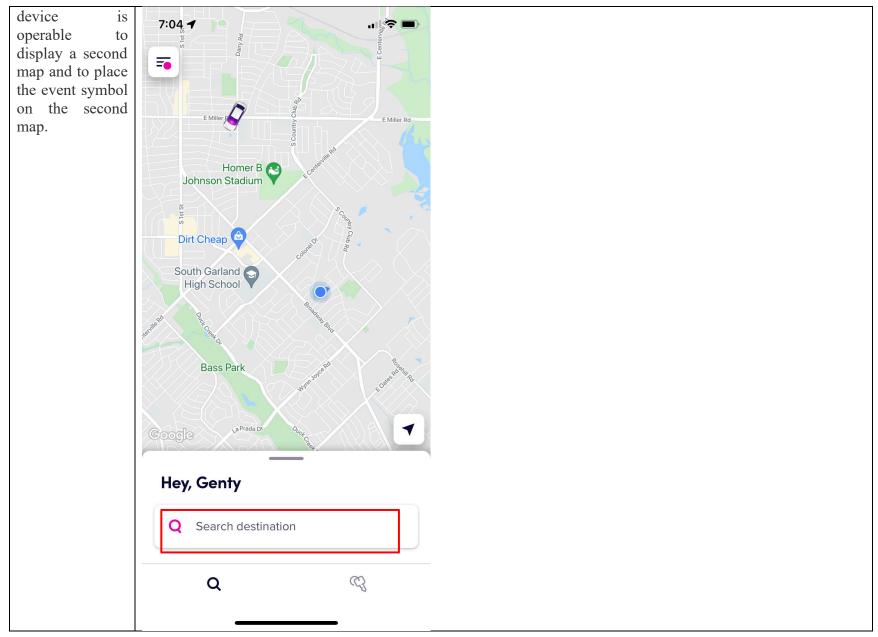




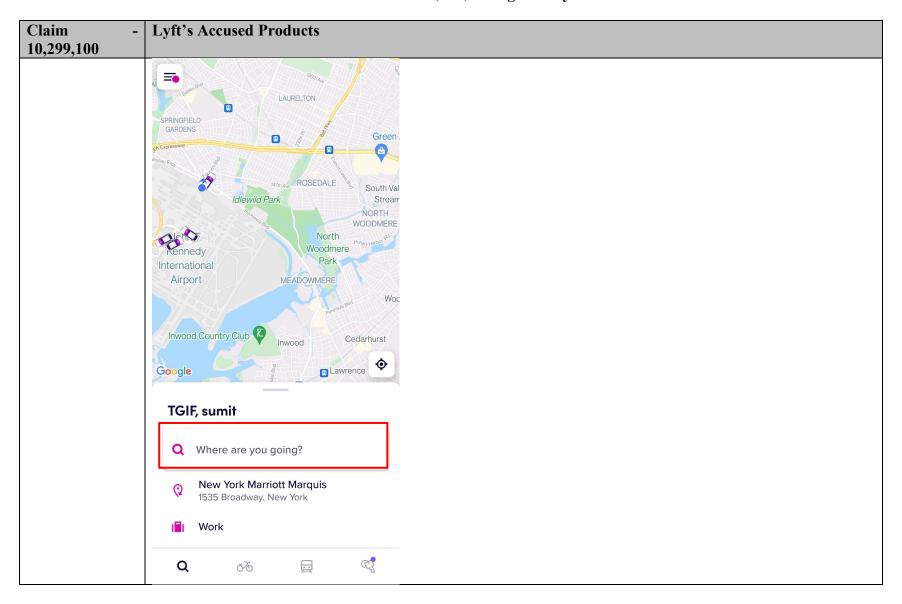


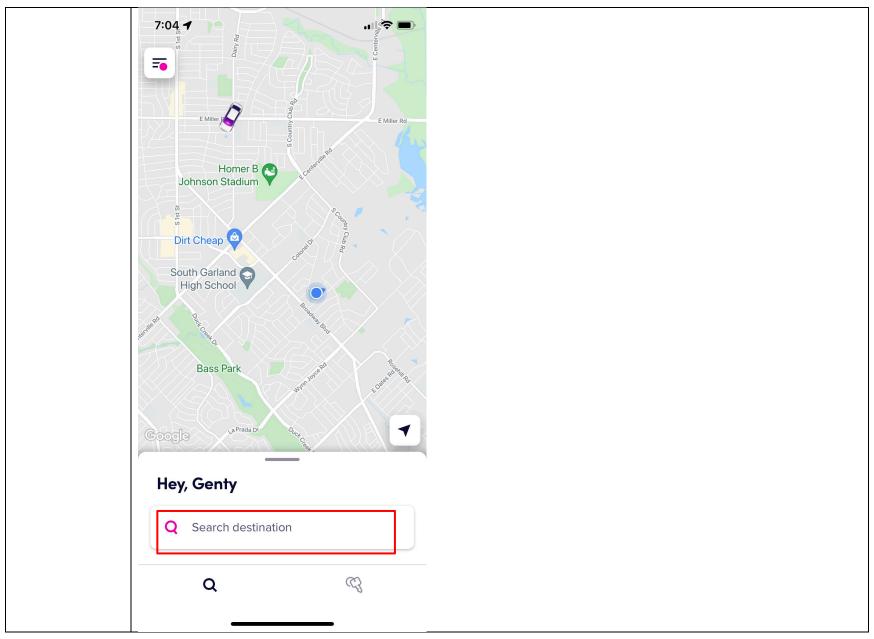
Claim - 10,299,100	Lyft's Accused Products
20. The method of claim 1, wherein the mobile device is a first mobile device, wherein the map is a first map, and wherein the method further comprises:	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: the mobile device is a first mobile device, wherein the map is a first map, and wherein the method further comprises: receiving second user input via user interaction with a second portion of the display of the first mobile device, the second user input specifying a position on the first map of an event symbol representing an event; and based on the second user input: determining coordinates of a location of the event based on coordinates of the specified position on the first map and the coordinate translation data; associating the location of the event with the event symbol; displaying the event symbol at the specified position on the first map; and transmitting the location of the event to a second mobile device corresponding to the first vehicle, wherein the second mobile device is operable to display a second map and to place the event symbol on the second map.
receiving second user input via user interaction with a second portion of the display of the first mobile device, the second user input specifying a position on the first map of an event symbol representing an event; and	See claim 1. The Lyft app meets this limitation because the user can provided user input in the Lyft app to specify multiple pickup/stop/destinations and the corresponding symbol/location will be placed on the map. This symbol/location is communicated to the driver's Lyft app. For example, through the Lyft app, a passenger inputs a destination address by clicking on the map interface. This input specifies a position on the map and is displayed as a symbol after the user inputs it. Further, this location is transmitted to the driver and is displayed as a symbol on the driver's app.





Claim -	Lyft's Accused Products
10,299,100	
21. The method	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 20,	contributing to the performance of: the coordinates of the location of the event are determined based on coordinates
wherein the	of the position of the event symbol on the map and the coordinate translation data.
coordinates of	
the location of	
the event are	
determined	See claims 1[H] and 20. For example, the coordinates of the destination address ("event") are determined by the
based on	symbol placed by the passenger on the map in the Lyft app.
coordinates of	
the position of	
the event symbol	
on the map and	
the coordinate	
translation data.	





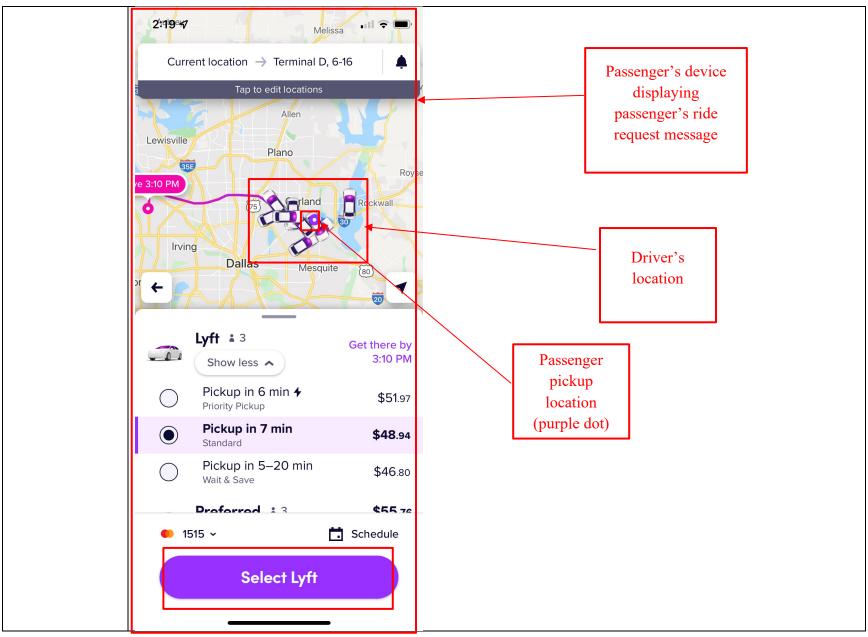
directly and/or indirectly by performing, inducing others to perform, and/or ne coordinates of the location of the event are determined based on coordinates and the coordinate translation data.
coordinates of the destination address ("event") are determined by the of the map by the passenger in the Lyft app.
directly and/or indirectly by performing, inducing others to perform, and/or wherein the map is first map, wherein the coordinate translation data are first an area depicted in the first map represents a first portion of an area depicted ethod further comprises: receiving, from a server, a third map representing a ed in the second map and second coordinate translation data correlating and map with corresponding coordinates of geographical locations. A map display to a user which can include multiple maps. The multiple maps maps and can be modified via user interaction with the map or automatically the Lyft app or Lyft server(s) or based on changes in location/orientation/view. In include multiple sets of coordinates.
1

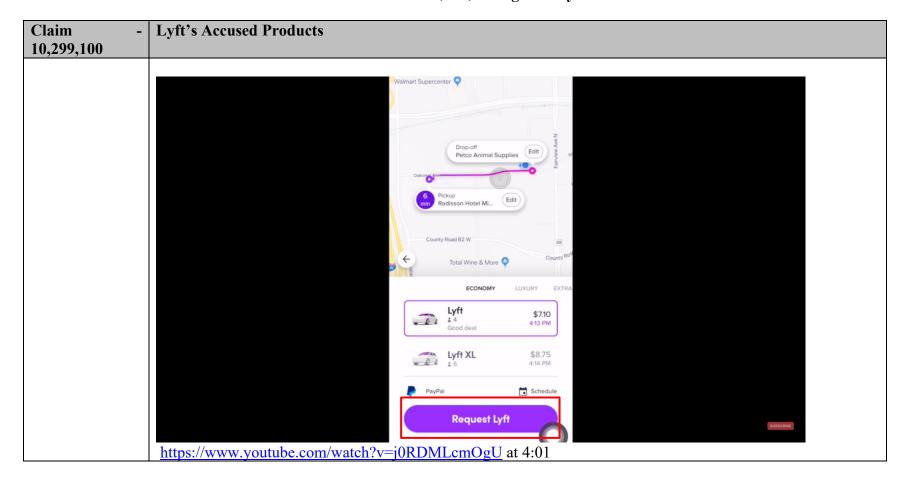
Claim - 10,299,100	Lyft's Accused Products
portion of an area	
depicted in a	
second map, and wherein the	
method further	
comprises:	
receiving, from a	
server, a third	
map representing	
a second portion	
of the area	
depicted in the	
second map and	
second	
coordinate	
translation data	
correlating	
coordinates of	
positions on the	
second map with	
corresponding	
coordinates of	
geographical	
locations.	
24[P]. A system	The Lyft Accused Products comprise a system comprising a mobile device contained in a portable housing, the
comprising a	mobile device comprising
mobile device	
contained in a	
portable housing,	
the mobile	

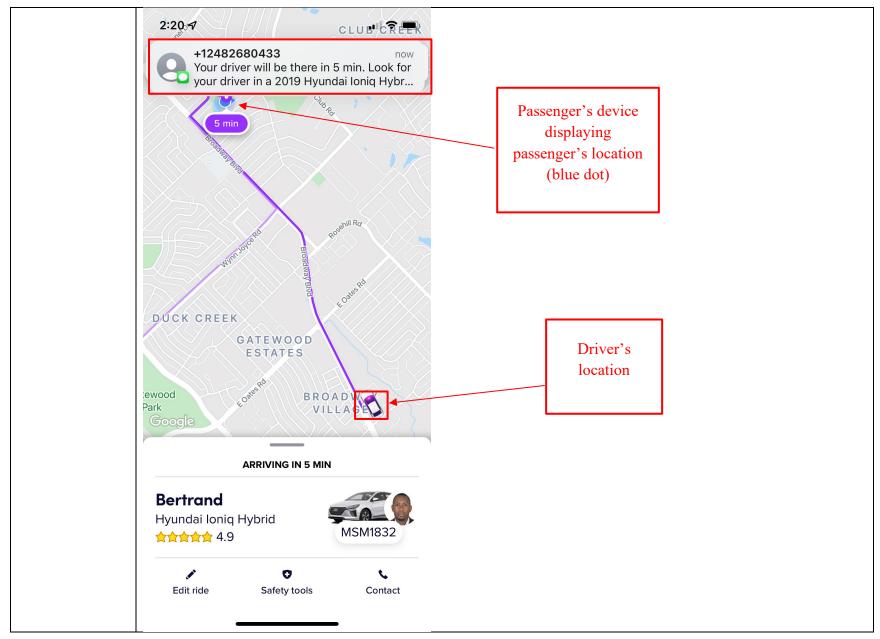
Claim - 10,299,100	Lyft's Accused Products
device comprising:	For example, Lyft provides the Lyft app for passengers and the Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications via mobile phones to establish a wireless communication network.
	The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. This process is facilitated through drivers' and passengers' smart devices including but not limited to smartphones and tablets having Lyft and Lyft Driver app installed. The smart devices of passengers and drivers are contained in a portable housing. Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app

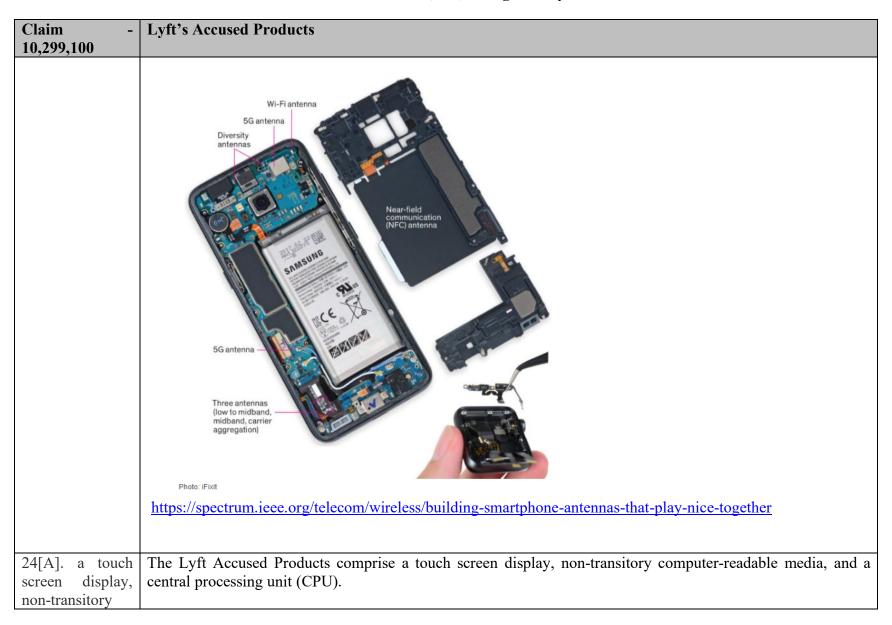
Claim - 10,299,100	Lyft's Accused Products
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	Go online
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride
	nupsiii w w wity tu comi nuoi postai now-to-give-a-nuc











Claim - 10,299,100	Lyft's Accused Products
	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprises a display, processor and storage media.

Claim - 10,299,100	Lyft's Accused Products
	Combining multiple components into a single chip saves on space, cost, and power consumption.
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating
	system to detecting when you press the power off button. SoCs connect to other components too,
	such as cameras, a display, RAM, flash storage, and much more.
	The list below contains the most common components that you will find inside a smartphone System-
	on-a-Chip. We're going to cover a few of the most important ones later on in this article.
	Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the
	Android OS and most of your apps.
	 Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an app's user interface and 2D/3D gaming.
	· Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files.
	· Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a
	CPU. Includes decompressing music files and analyzing gyroscope sensor data.
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine
	learning (AI) tasks. These include voice recognition and camera processing.
	 Video encoder/decoder — Handles the power-efficient conversion of video files and formats.
	· Modems — Converts wireless signals into data your phone understands. Components
	include 4G LTE, 5G, WiFi, and Bluetooth modems.
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/
24[B]. a mobile device	The Lyft Accused Products comprise a mobile device transmitter communicatively coupled to the CPU.

Claim -	Lyft's Accused Products
10,299,100	
transmitter communicatively coupled to the CPU;	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a transmitter module (antenna) coupled to a processor to send data.
	1. Antenna Antenna is used to receive and transmit radio frequency. It is inbuilt in the cabinet of the mobile phone. These are called inbuilt antenna. http://www.mobilecellphonerepairing.com/mobile-phone-parts.html

Claim - 10,299,100	Lyft's Accused Products
	Mobile phone contents
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone:
	Radio frequency - receiver and transmitter
	Digital signal processing
	Analogue / digital conversion Control processor
	SIM or USIM card
	Power control and battery
	Source: https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php
24[C]. a mobile device receiver communicatively coupled to the CPU;	The Lyft Accused Products comprise a mobile device receiver communicatively coupled to the CPU.
	For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a receiver module (antenna) coupled to a processor to receive data.

Claim - 10,299,100	Lyft's Accused Products
	1. Antenna
	Antenna is used to receive and transmit radio frequency. It is inbuilt in the cabinet of the mobile phone. These are called inbuilt antenna. http://www.mobilecellphonerepairing.com/mobile-phone-parts.html
	Mobile phone contents
	Mobile phones contain a large amount of circuitry, each of which is carefully designed to optimise its performance. The cell phone comprises analogue electronics as well as digital circuits ranging from processors to display and keypad electronics. A mobile phone typically consists of a single board, but within this there are a number of distinct functional areas, but designed to integrate to become a complete mobile phone:
	Radio frequency - receiver and transmitter
	Digital signal processing Analogue / digital conversion
	Control processor
	SIM or USIM card
	Power control and battery
	Source:https://www.electronics-notes.com/articles/connectivity/cellular-mobile-phone/how-cellphone-works-inside-components.php

Claim -	Lyft's Accused Products
24[D]. a global positioning system (GPS) receiver, communicatively coupled to the CPU, configured to obtain geographical coordinates corresponding to a geographical location of the mobile device;	The Lyft Accused Products comprise a global positioning system (GPS) receiver, communicatively coupled to the CPU, configured to obtain geographical coordinates corresponding to a geographical location of the mobile device. For example, Lyft drivers' and passengers' smart devices including but not limited to smartphones and tablets (with the Lyft or Lyft Driver app installed) comprise a GPS module coupled to a processor to determine the location of the smart device. You must have seen that every Android and iOS device in today's age comes with CPS right inside it. This is one feature that will be there in every smartphone no matter what the price of that device might be. And that is because of the fact that GPS is the most basic yet most useful feature on every smartphone. Just for information, the GPS stands for Global Positioning System and it provides accurate geolocation and time information for every equipment that is equipped with a GPS receiver. Now, the best example of using GPS is with services such as Google Maps, Apple Maps, and others where you can see where exactly you are right now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS satellite. https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device
24[E]. the CPU configured to	See Claim 1[A] above.

Claim - 10,299,100	Lyft's Accused Products
execute	
instructions to	
perform	
operations	
comprising:	
24[F].	See Claim 1[B] above.
associating the	
mobile device	
with an	
identifier,	
wherein the	
identifier	
corresponds to a	
network	
participant	
24[G].	See Claim 1[C] above.
determining, by the CPU, a	
device location	
corresponding to	
the geographical	
location of the	
mobile device	
based on the	
geographical	
coordinates	
obtained by the	
GPS receiver	
located within	

Claim -	Lyft's Accused Products
10,299,100	
the mobile	
device;	
24[H]. receiving,	See Claim 1[D] above.
from a server,	
mapping data	
including a map	
and coordinate	
translation data	
correlating	
coordinates of	
positions on the	
map with	
corresponding	
coordinates of	
geographical	
locations	
24[I]. receiving,	See Claim 1[E] above.
from a server,	
location data	
indicating	
vehicle locations	
of one or more	
vehicles	
24[J]. marking	See Claim 1[F] above.
the map with a	
plurality of	
symbols	
comprising: a	
participant	
symbol	

Claim -	Lyft's Accused Products
10,299,100	
corresponding to	
the device	
location, one or	
more facility	
symbols	
corresponding to	
respective	
facility locations	
of one or more	
facilities, and	
one or more	
vehicle symbols	
corresponding to	
respective	
vehicle locations	
of the one or	
more vehicles,	
wherein marking	
the map	
comprises:	
24[K].	See Claim 1[G] above.
determining,	
based at least in	
part on the	
vehicle locations	
and the	
coordinate	
translation data,	
positions on the	
map	

Claim -	Lyft's Accused Products
10,299,100	
corresponding to	
the vehicle	
locations,	
displaying the	
map on the	
display of the	
mobile device,	
and	
placing the	
vehicle symbols	
on the map at the	
determined	
positions	
corresponding to	
the vehicle	
locations;	
24[L].	See Claim 1[H] above.
responsive to	
user selection of	
a portion of the	
display	
corresponding to	
a position on the	
map, identifying	
a selected facility	
symbol based on	
the selected	
position,	
comprising:	
initiating a	

Claim - 10,299,100	Lyft's Accused Products
search of a set of	
symbols	
-	
_	
facility symbols for a symbol	
for a symbol located nearest to	
the selected	
position and,	
based on a result	
of the search,	
identifying the	
selected facility	
symbol as the	
symbol as the symbol located	
nearest to the	
selected position;	
24[M]. after	See Claim 1[I] above.
receiving user	See Claim I[1] above.
input on the	
touch screen	
display,	
transmitting, by	
the mobile	
device	
transmitter, first	
information to a	
first vehicle of	
the one or more	
vehicles; and	

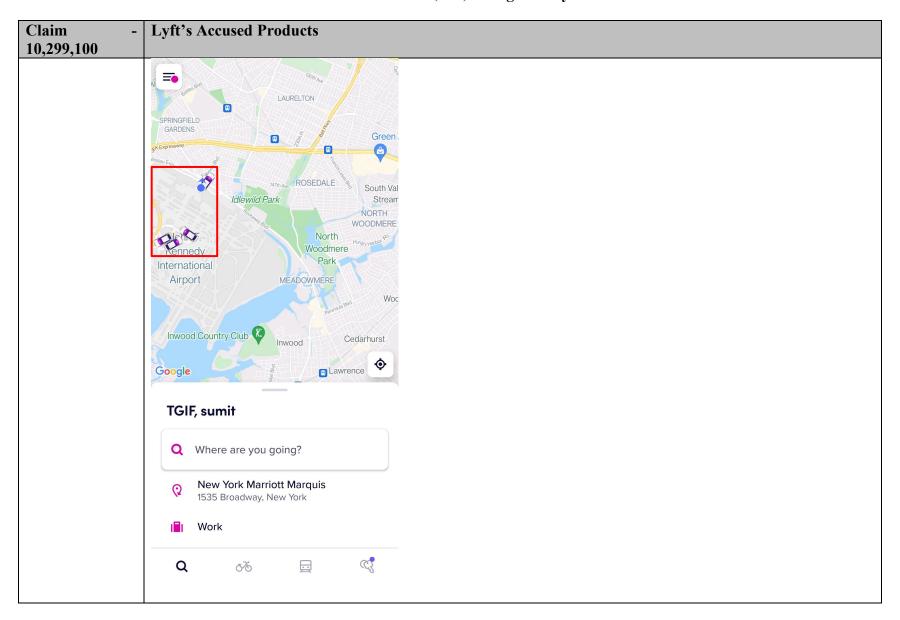
Claim -	Lyft's Accused Products
10,299,100	
24[N]. after	See Claim 1[J] above.
transmitting the	
first information	
to the first	
vehicle,	
receiving, at the	
mobile device	
receiver, second	
information	
corresponding to	
the first vehicle	
and displaying	
the received	
second	
information on	
the touch screen	
display of the	
mobile device,	
24[O]. wherein	See Claim 1[K] above.
the mobile	
device does not	
have access to a	
phone number	
associated with a	
computing	
device	
corresponding to	
the first vehicle,	
an Internet	
Protocol (IP)	

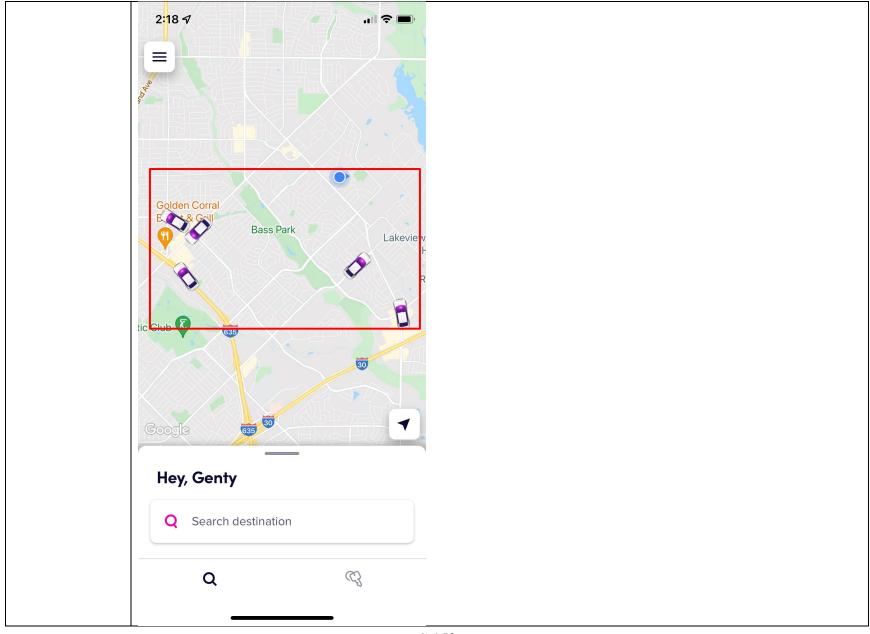
Claim -	Lyft's Accused Products
10,299,100	
address	
associated with	
the computing	
device	
corresponding to	
the first vehicle,	
and an e-mail	
address	
associated with	
the computing	
device	
corresponding to	
the first vehicle.	
25. The system	See Claim 5 above.
of claim 24,	
wherein the	
operations	
further comprise:	
receiving, from a	
server, at the	
mobile device	
receiver, updated	
respective	
vehicle locations	
of the one or	
more vehicles;	
and	
updating, based	
on the received	
updated vehicle	

Claim -	Lyft's Accused Products
10,299,100	
locations and the	
coordinate	
translation data,	
positions of the	
one or more	
vehicle symbols	
on the map	
displayed on the	
touch screen	
display.	
26. The system	See Claim 10 above.
of claim 24,	
wherein the	
operations	
further comprise:	
communicating,	
by the mobile	
device	
transmitter, the	
identifier to a	
server; and	
joining a	
communication	
network after the	
communication	
of the first	
identifier to the	
server.	
27. The system	See Claim 11 above.
of claim 26,	

Claim -	Lyft's Accused Products
10,299,100	
wherein the	
identifier is a	
first identifier,	
and wherein the	
communication	
network	
comprises one or	
more	
communication	
devices	
corresponding,	
respectively, to	
one or more	
second vehicles,	
and wherein each	
of the one or	
more	
communication	
devices is	
associated with a	
respective	
second identifier.	
28. The system	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or
of claim 27,	contributing to the performance of: the operations further comprise: receiving, by the mobile device receiver, the
wherein the	second identifiers corresponding to one or more communication devices; and displaying, on the map displayed on
operations	the touch screen display, one or more second vehicle symbols corresponding to the second identifiers
further comprise:	corresponding to the second vehicles.
receiving, by the	
mobile device	
receiver, the	

Claim -	Lyft's Accused Products
10,299,100	
second	For example, before a passenger requests for a ride, the Lyft app displays symbols corresponding to multiple
identifiers	vehicles based on their location near the passenger's location. Therefore, Lyft's servers fetch identifiers and
corresponding to	locations of the drivers and their vehicles and display the drivers as symbols on the passenger's mobile device.
one or more	
communication	
devices; and	
displaying, on	
the map	
displayed on the	
touch screen	
display, one or	
more second	
vehicle symbols	
corresponding to	
the second	
identifiers	
corresponding to	
the second	
vehicles.	





Claim -	Lyft's Accused Products
10,299,100	
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
29. The system	See Claim 12 above.
of claim 27,	
wherein the	
operations	
further comprise:	
receiving, by the	
mobile device	
receiver, the	
second	
identifiers	
corresponding to	
one or more	
communication	
devices; and	
displaying, on	
the map	
displayed on the	
touch screen	
display, one or	
more second	
vehicle symbols	
corresponding to	
the second	
identifiers	
corresponding to	
the second	
vehicles.	

Claim -	Lyft's Accused Products
30. The system of claim 24, wherein: transmitting the first information to the first vehicle comprises	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: The system of claim 24, wherein: transmitting the first information to the first vehicle comprises transmitting data to a server using an Internet Protocol; the data transmitted to the server includes the first information and a second identifier corresponding to a second network participant associated with the computing device corresponding to the first vehicle; the second information corresponding to the first vehicle is transmitted by the server to the mobile device using the Internet Protocol; and an IP address of the server is accessible to the mobile device.
transmitting data to a server using an Internet Protocol; the data transmitted to the server includes the first information and	For example, Lyft's servers access passengers' and drivers' data through the Lyft app installed on the passengers' and drivers' mobile devices using an Internet Protocol. All information including but not limited to the location information and the identifier are transmitted to the Lyft servers via Internet Protocol. Lyft Driver app
a second identifier corresponding to	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
a second network participant associated with the computing device corresponding to the first vehicle; the second information	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same. https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
corresponding to	

Claim - 10,299,100	Lyft's Accused Products
the first vehicle is transmitted by	What is Lyft?
the server to the mobile device using the Internet	Lyft is a platform that connects drivers with individuals and organizations that need rides.
Protocol; and an IP address of the server is	https://www.lyft.com/drive-with-lyft
accessible to the mobile device.	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Defendant requires additional information in accordance with P.R. 3-1 and for any other reasons.
31. The system of claim 30, wherein:	See claim 30 above.
the server stores an IP address of	
device associated with the second	
network participant identified by the	
second identifier; and the server	
transmits the first information to	
the computing device corresponding to	

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 888 of 1092

RESTRICTED CONFIDENTIAL SOURCE CODE

Claim -	Lyft's Accused Products
10,299,100	
the first vehicle	
in a message	
addressed to the	
stored IP address	
of the computing	
device	
corresponding to	
the first vehicle.	

Attachment D for US Patent No. 8,213,970 Against Lyft Accused Products

Based on information presently available,¹ Defendant AGIS Software Development LLC ("AGIS Software") contends that Defendant Lyft Technologies Inc. ("Lyft" or "Plaintiff") infringes claims 2, 10, 12, and 13 (the "Asserted Claims") of U.S. Patent No. 8,213,970 (the "'970 Patent") through the Accused Products which are manufactured, sold, offered for sale, and/or used by Lyft

The Accused Products comprise the Lyft and Lyft Driver applications, servers, and services manufactured, used, or sold by Lyft, Inc. during and after 2016. AGIS Software reserves the right to seek leave of court to amend this list of Accused Products after the filing of an amended complaint or as discovery progresses.

Lyft directly infringes each of the Asserted Claims by making, using, importing, testing, distributing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. Lyft knows, or should have known, that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

D-1

¹ There is no operative complaint asserting non-infringement of any patent claim in this action at this time. AGIS Software reserves the right to update its contentions upon receipt of any future amended complaint.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 890 of 1092

Attachment D for US Patent No. 8,213,970 Against Lyft Accused Products

The following chart identifies specifically where each limitation of each Asserted Claim is found within the Accused Products, and in particular, the corresponding elements that meet the limitations in the Lyft and Lyft Driver applications, services, and services. On information and belief, each charted version of the Lyft Rider and Driver Apps are representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android and iOS operating systems.

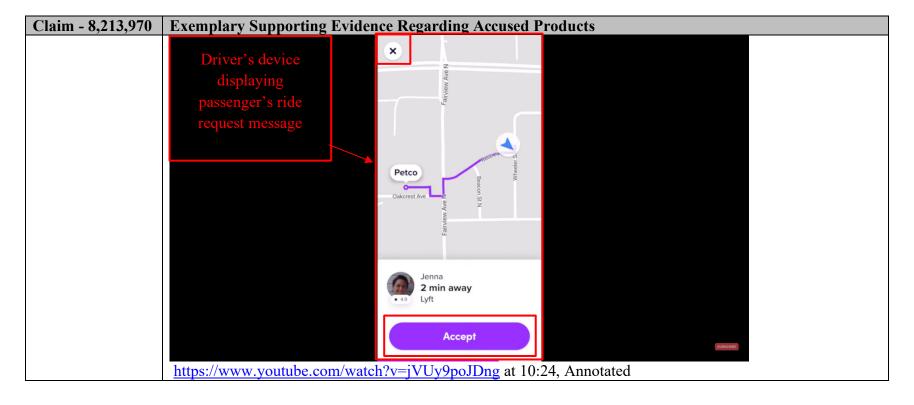
AGIS Software does not concede that any claims of the '970 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its accused products. Accordingly, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS Software. Furthermore, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

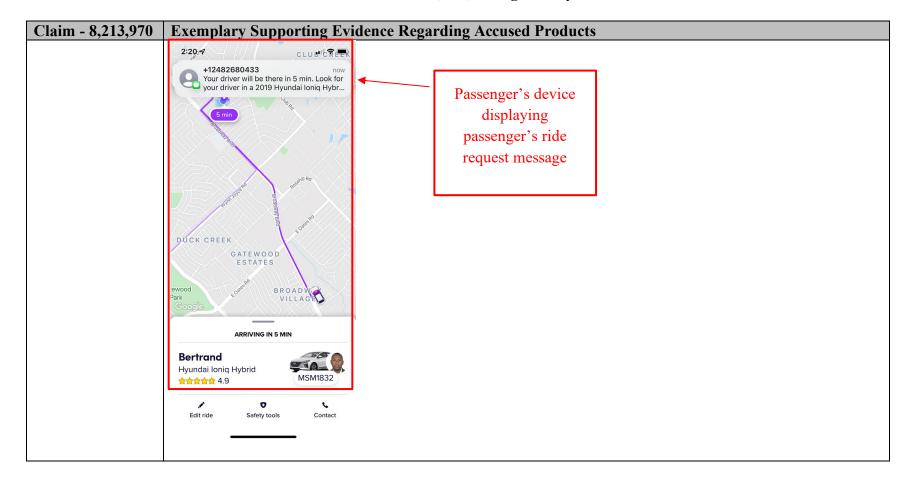
The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

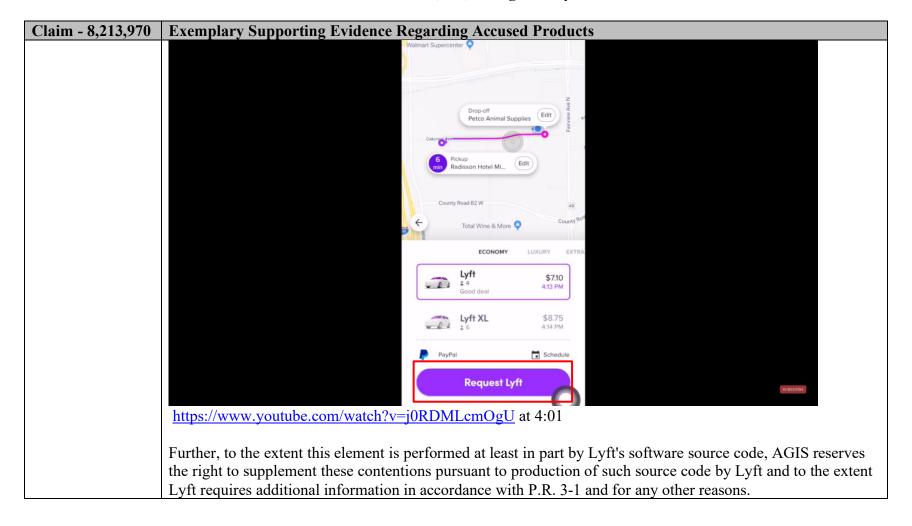
² The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. 205 (E.D. Tex. Oct. 10, 2018); *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. 147 (E.D. Tex. Dec. 8, 2020); *AGIS Software Dev. LLC v. T-Mobile USA, Inc., et al.*, No. 2:21-cv-00072-JRG, Dkt. 213 (E.D. Tex. Nov. 10, 2021). AGIS Software reserves the right to update its constructions and contentions in view of this Court's claim construction order.

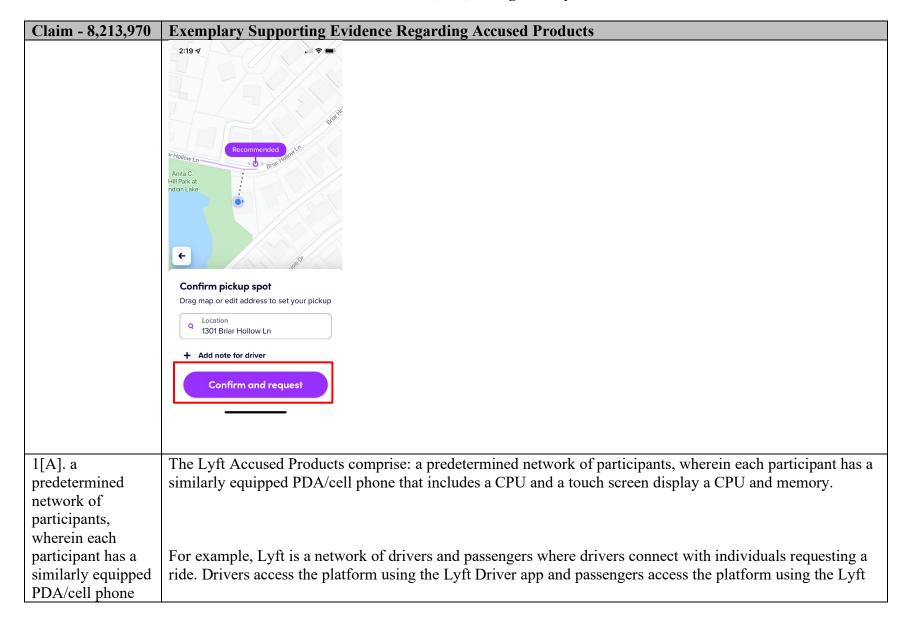
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
(Unasserted) 1[P].	The Lyft Accused Products comprise a communication system for transmitting, receiving, confirming receipt,
A communication	and responding to an electronic message. Lyft infringe directly and/or indirectly by providing a
system for	communication system for transmitting, receiving, confirming receipt, and responding to an electronic
transmitting,	message.
receiving,	
confirming receipt,	
and responding to	
an electronic	For example, Lyft provides Lyft Rider app for passengers and Lyft Driver app for drivers. The Lyft apps for
message,	riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to
comprising:	request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their
	services host information related to and instructions for processing user/device/vehicle accounts, location data,
	and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are
	used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's
	customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by
	Lyft's customers and Lyft's personnel.
	The Lyft Driver application receives an electronically transmitted request for a ride message and
	acknowledges the receipt of the message which triggers a forced message alert that locks the device for a
	period of time until the driver sends a response message (decline or accept) to clear the locked display
	("transmitting, receiving, confirming receipt, and responding to an electronic message").
	Lyft Driver app
	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for
	passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can
	keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver
	app, we've kept its features the same.

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	2-30 PM Calacriotheria Alistination Phonology Phono
	Go online
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride

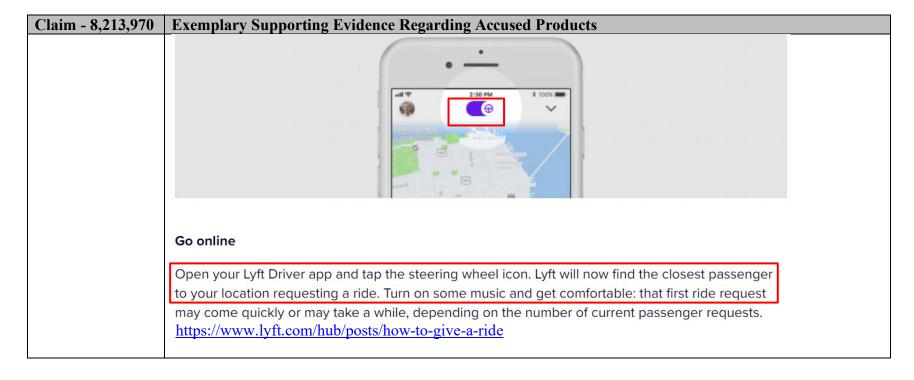


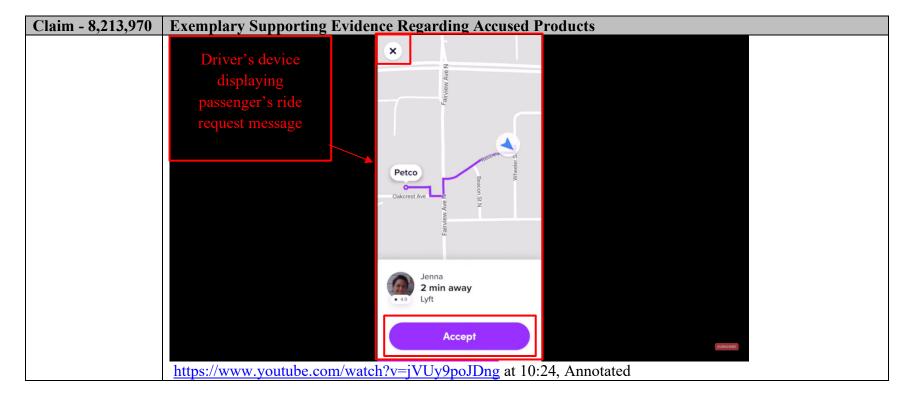


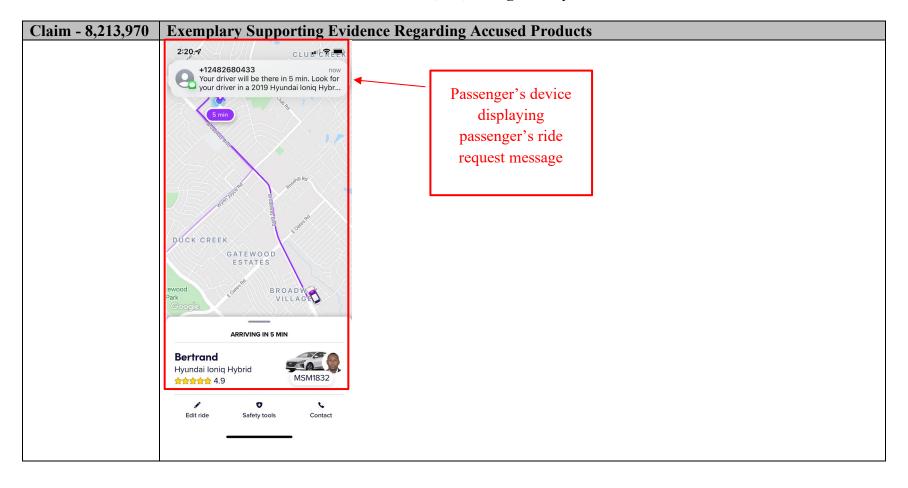


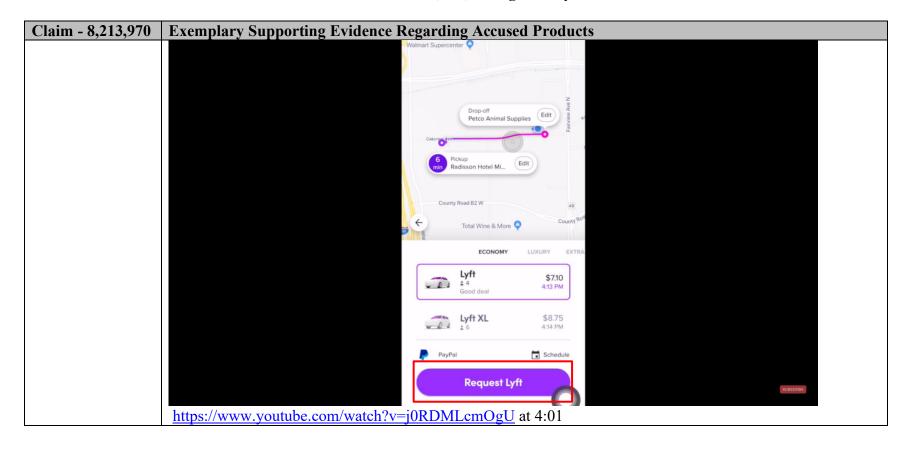


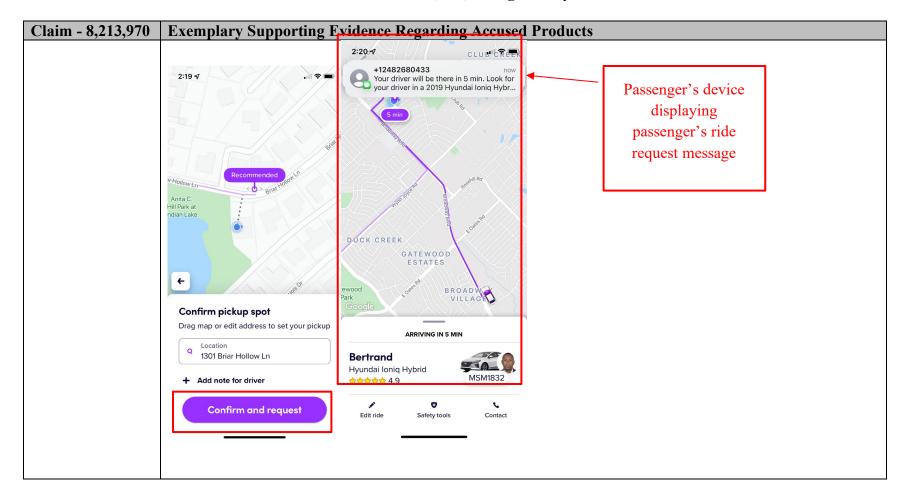
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
that includes a	app on their respective smart devices including but not limited to smartphones and tablets comprising a
CPU and a touch	display, a processor and a storage media.
screen display a	
CPU and memory	Lyft Driver app
	Ly II DI IVEI UPP
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for
	passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can
	keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver
	app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Wilde is Lyic.
	Lyft is a platform that connects drivers with individuals and organizations that need
	rides.
	https://www.lyft.com/drive-with-lyft

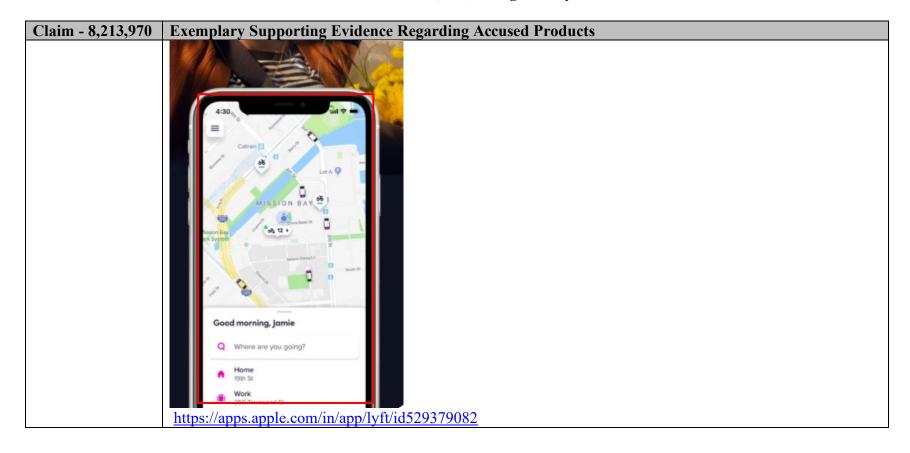


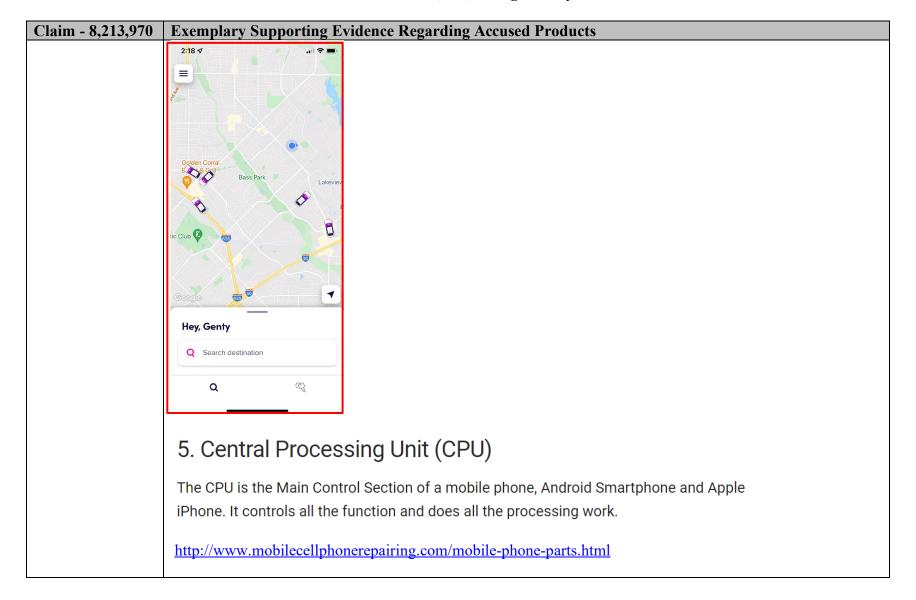








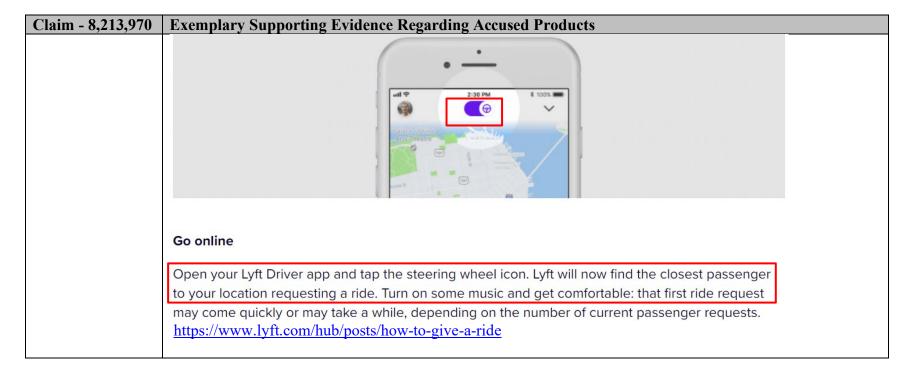


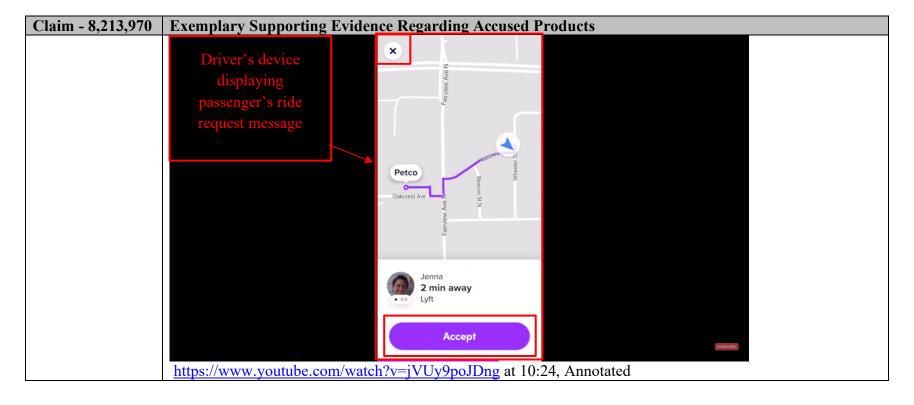


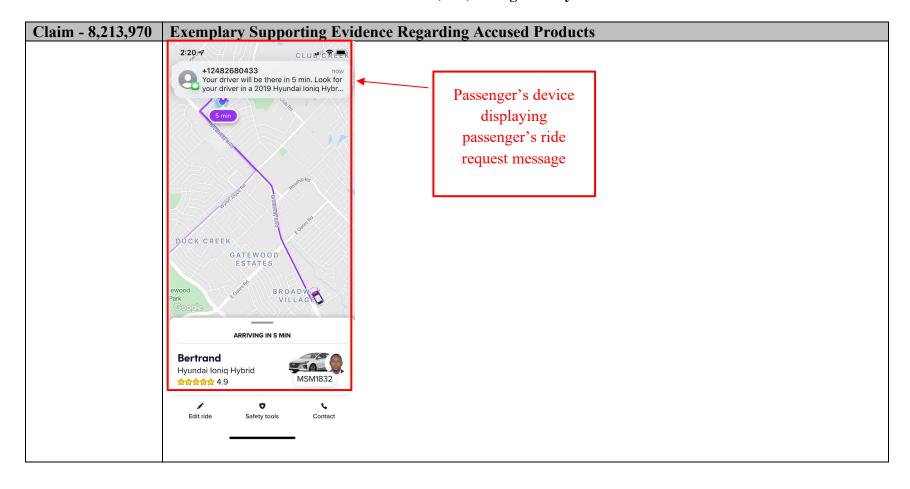
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 905 of 1092

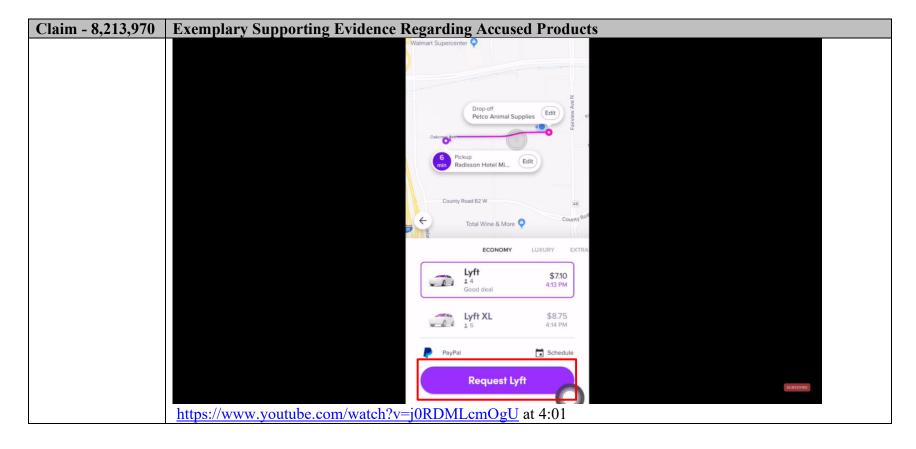
RESTRICTED CONFIDENTIAL SOURCE CODE

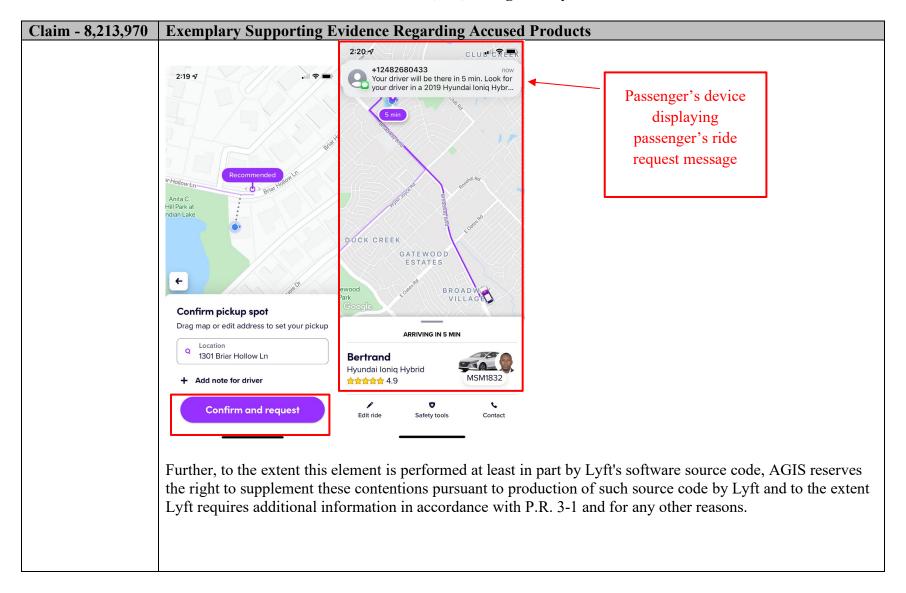
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	6. RAM (<i>Random Access Memory</i>)
	RAM is an erasable memory where older data and information can be erased and new data and information can be stored.
	http://www.mobilecellphonerepairing.com/mobile-phone-parts.html
1[B]. a data	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
transmission means that	and/or contributing to the performance of: a data transmission means that facilitates the transmission of electronic files between said PDA/cell phones in different locations
facilitates the	ciccionic mes octween said i DA/cen phones in different locations
transmission of	
electronic files	
between said	For example, Lyft's servers connect passengers to nearby drivers when a request for a ride is placed. The
PDA/cell phones	servers receive a passenger's request for a ride and communicate the request to nearby drivers. The nearby
in different	drivers receive the request for a ride from the passengers to which they either accept or decline the request.
locations	The locations of the passenger and the nearby drivers are different from each other.



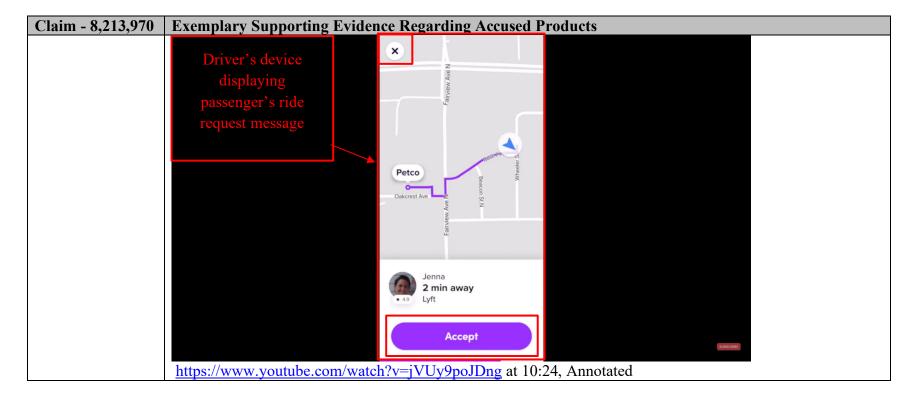


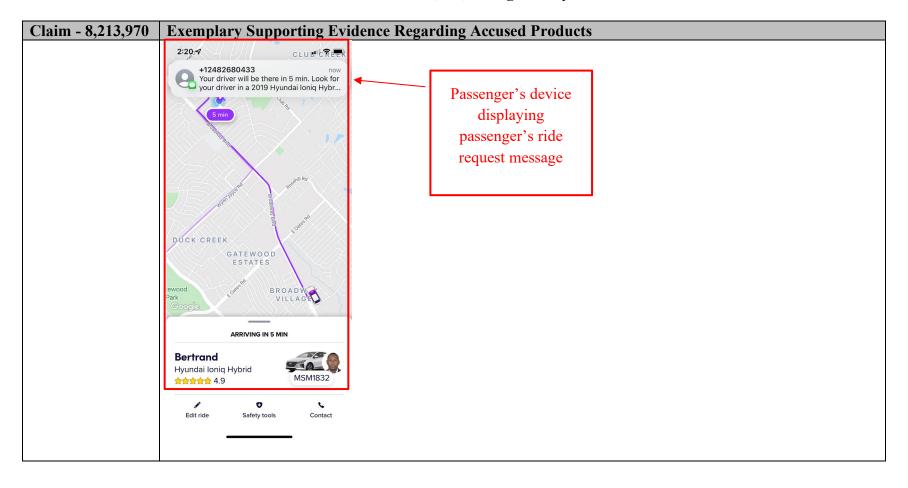


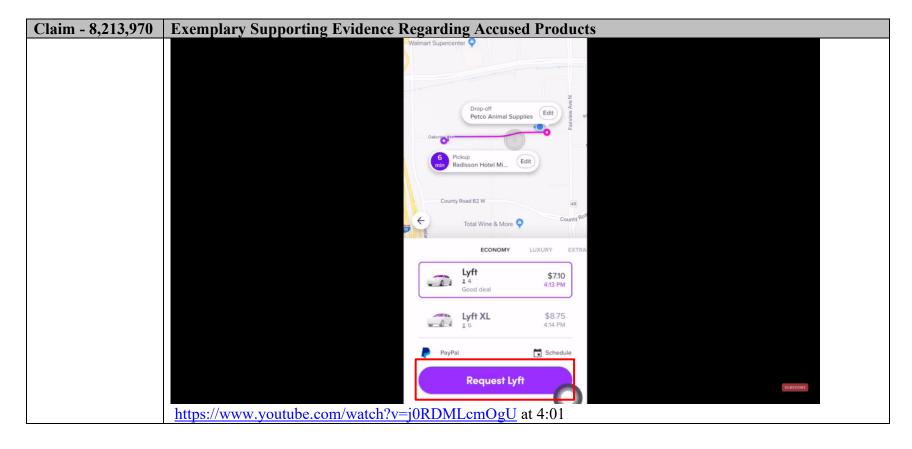


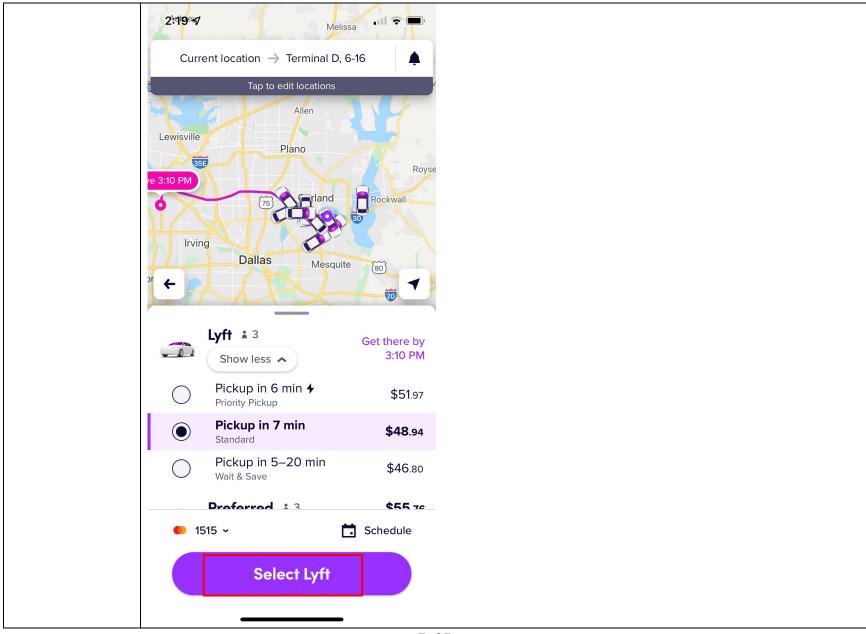


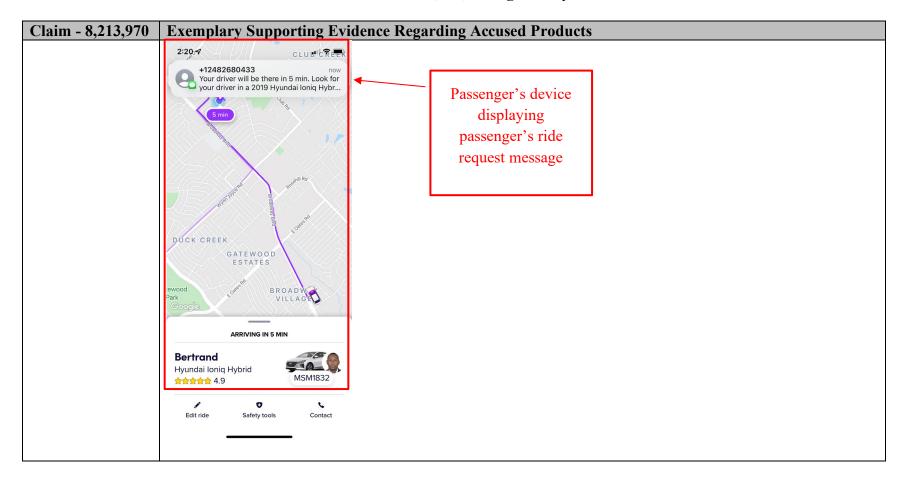
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
1[C]. a sender	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
PDA/cell phone	and/or contributing to the performance of: a sender PDA/cell phone and at least one recipient PDA/cell phone
and at least one	for each electronic message
recipient PDA/cell	
phone for each	
electronic message	
	For example, Lyft's servers connects the passengers ("sender") to the nearby drivers ("recipient") when a request for a ride is placed. The servers receive a passenger's request for a ride and communicates the request to nearby drivers. The nearby drivers receive the request for a ride from the passengers to which they either accept or decline the request.
	Calcan of kind Arts The arts (a) (b) (c) (c) (d) (d) (d) (d) (e) (e) (e) (e
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests.
	to your location requesting a ride. Turn on some music and get comfortable: that first ride request

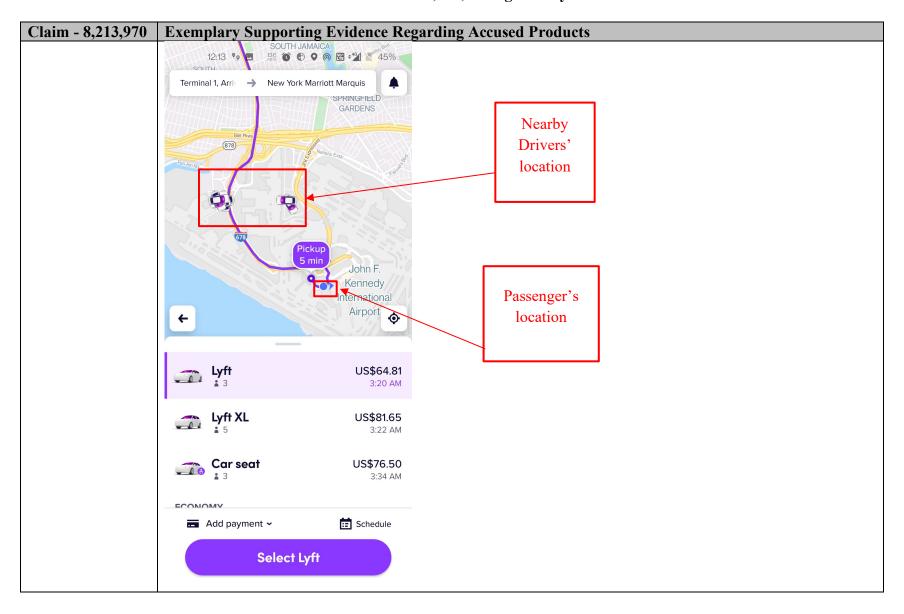


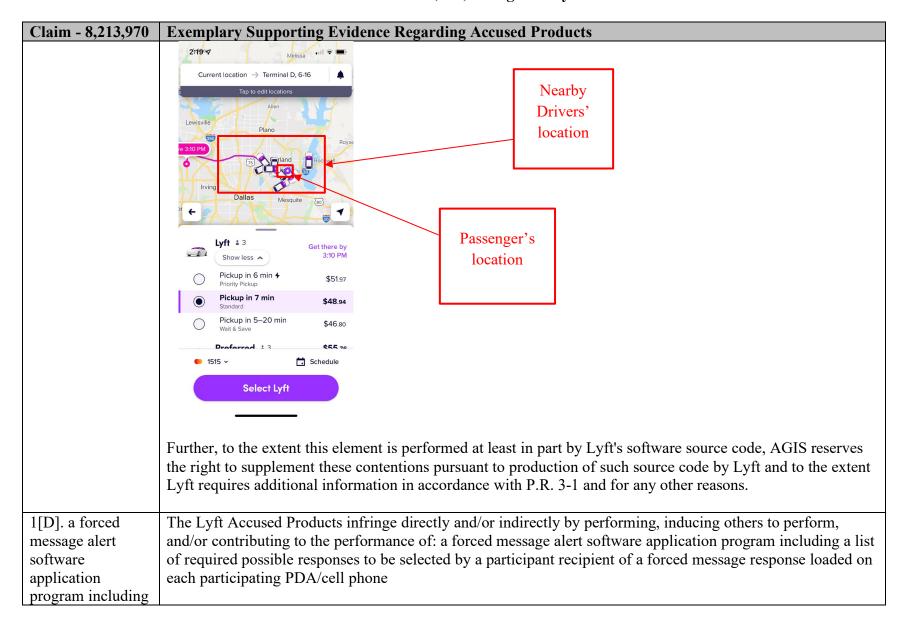




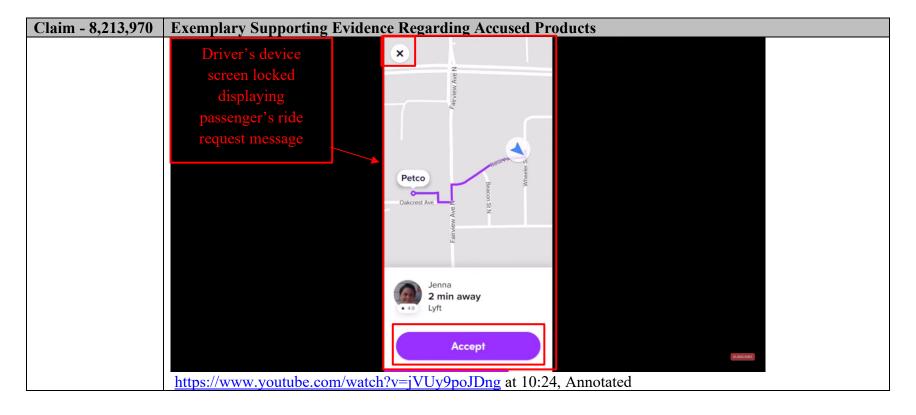


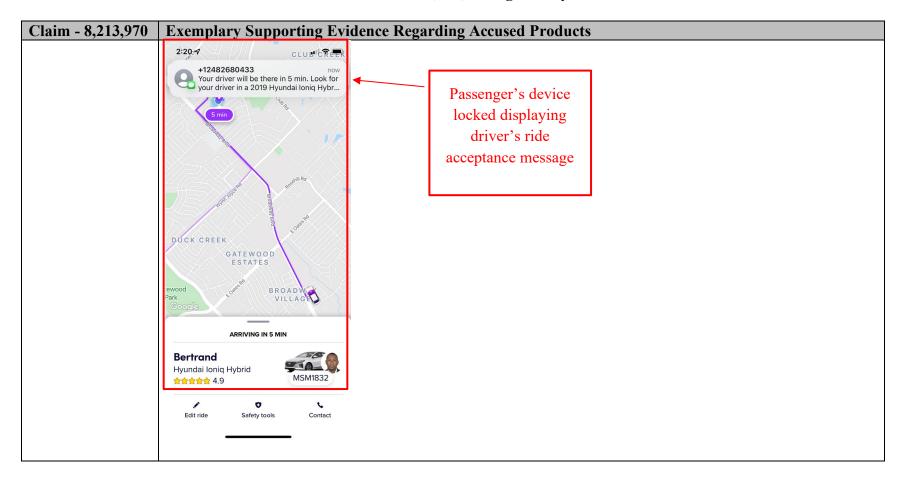


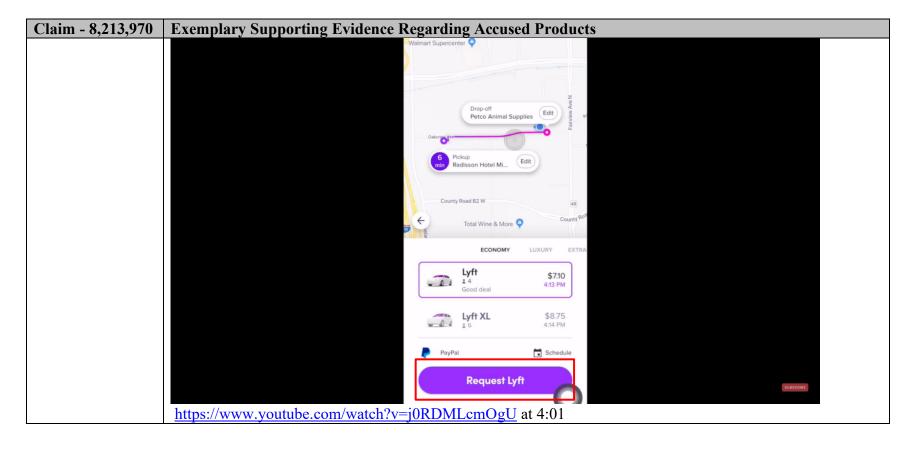


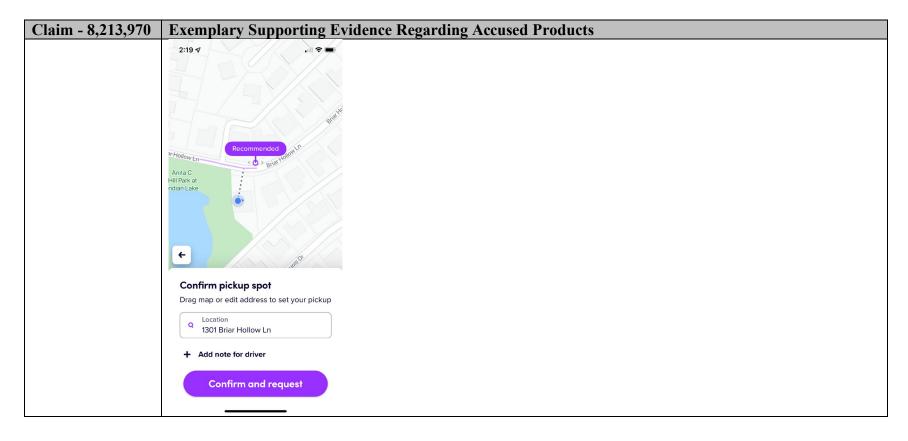


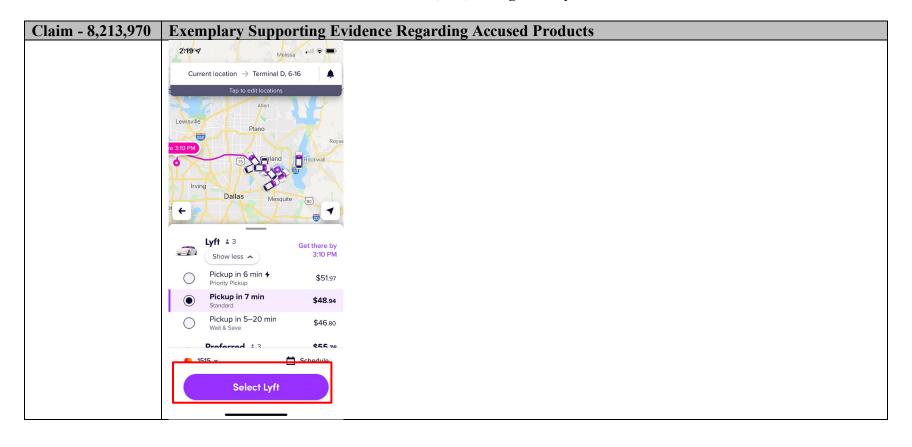
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
a list of required	
possible responses	
to be selected by a	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders
participant	and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request,
recipient of a	view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s)
forced message	and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services
response loaded on	host information related to and instructions for processing user/device/vehicle accounts, location data, and map
each participating	data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by
PDA/cell phone	Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and
	personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's
	personnel.
	The Lyft Driver application receives an electronically transmitted request for a ride which triggers a forced
	message alert that locks the device for a period of time until the driver ("recipient") sends a response message
	(decline or accept) to clear the locked display.

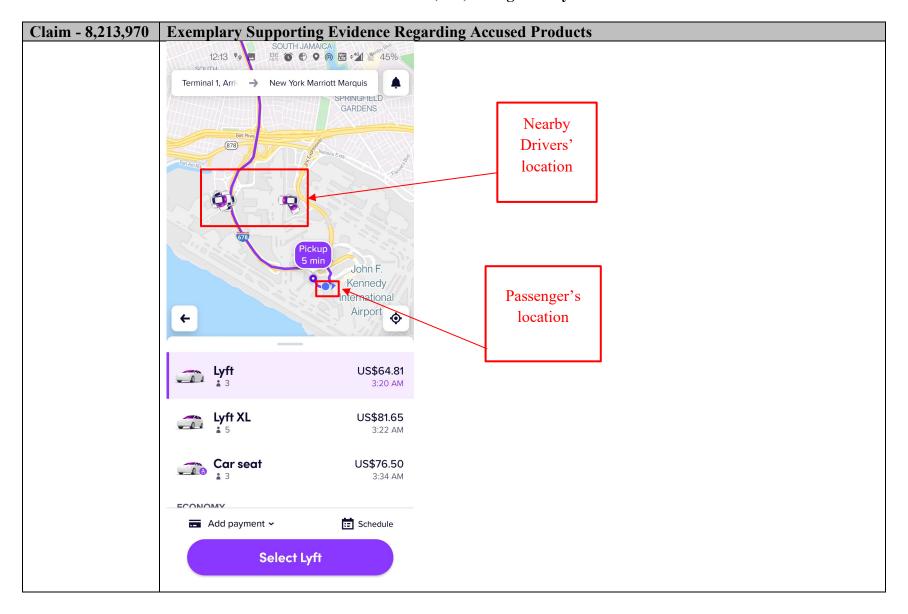


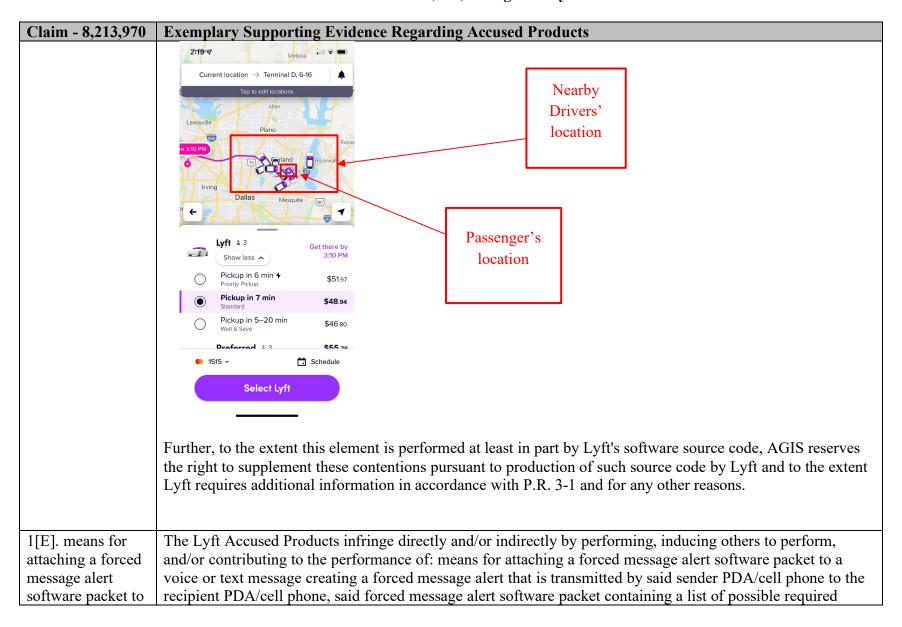




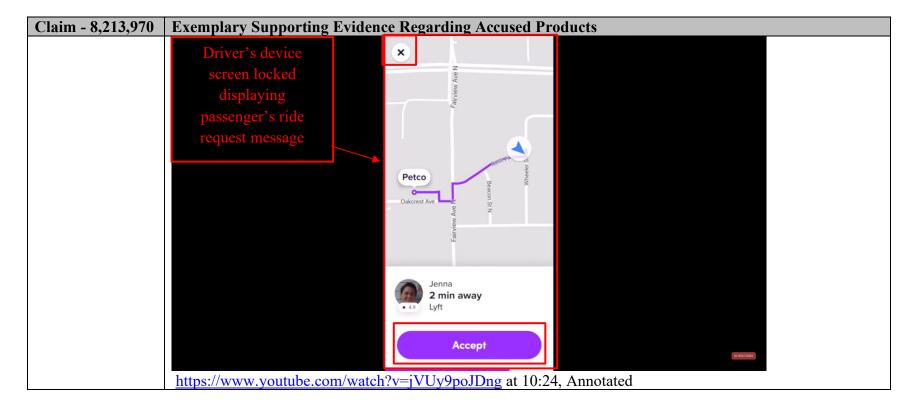


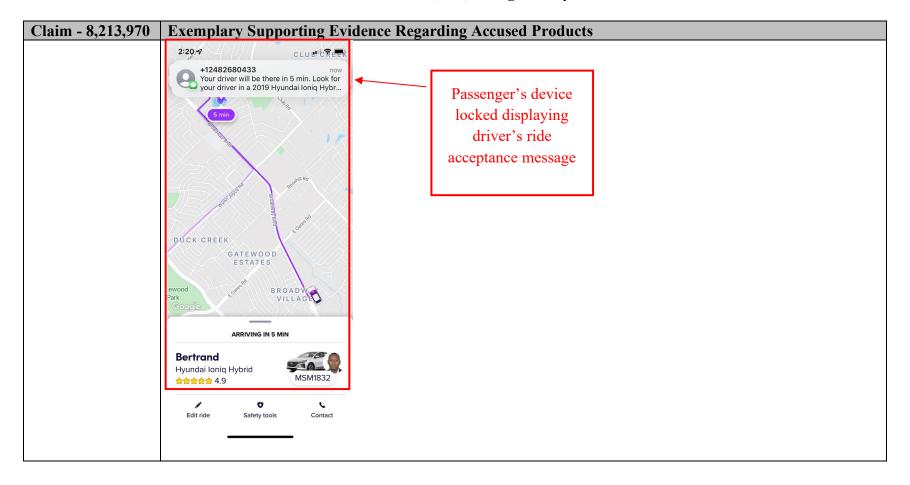


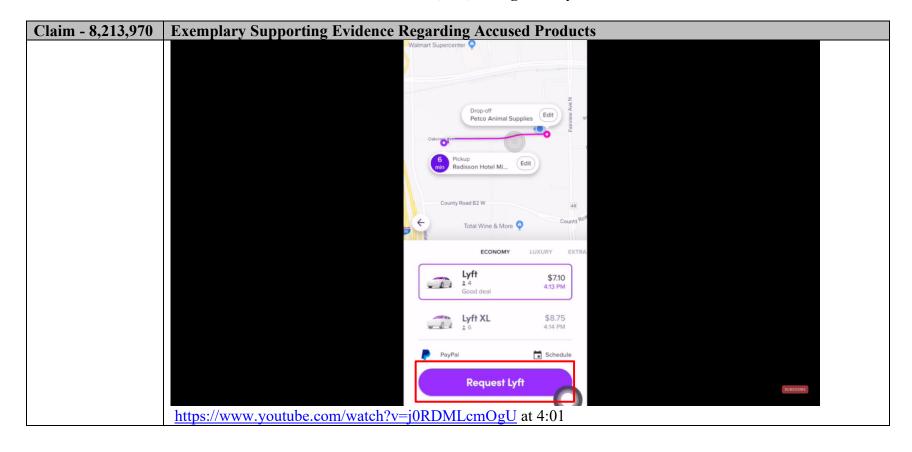


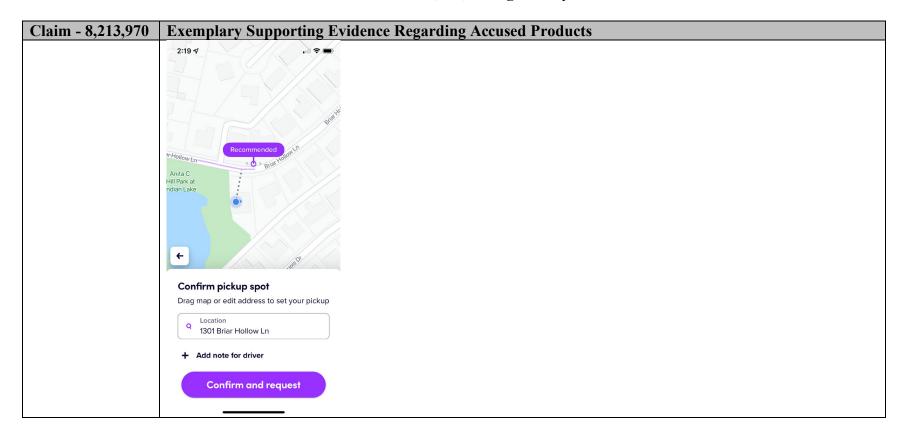


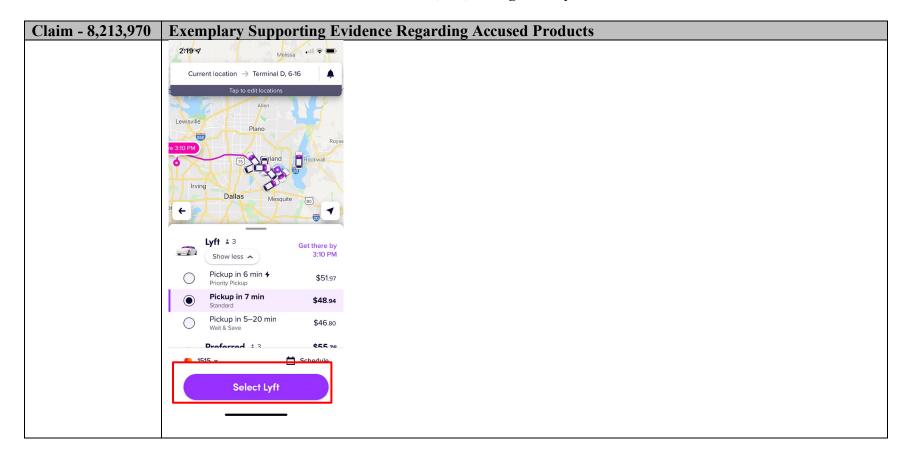
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
a voice or text	responses and requiring the forced message alert software on said recipient PDA/cell phone to transmit an
message creating a	automatic acknowledgment to the sender PDA/cell phone as soon as said forced message alert is received by
forced message	the recipient PDA/cell phone.
alert that is	
transmitted by said	
sender PDA/cell	
phone to the	For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger
recipient PDA/cell	which triggers a forced message alert that locks the driver's device for a period of time until the driver
phone, said forced	("recipient") sends a response message (decline or accept) to clear the locked display.
message alert	
software packet	For example, at the backend, each nearby driver's Lyft app that receives the ride request sends an
containing a list of	acknowledgement of receipt to the Lyft server(s). The acknowledgement is communicated to the rider's Lyft
possible required	app via the Lyft server(s).
responses and	
requiring the	
forced message	
alert software on	
said recipient	
PDA/cell phone to	
transmit an	
automatic	
acknowledgment	
to the sender	
PDA/cell phone as	
soon as said forced	
message alert is	
received by the	
recipient PDA/cell	
phone;	

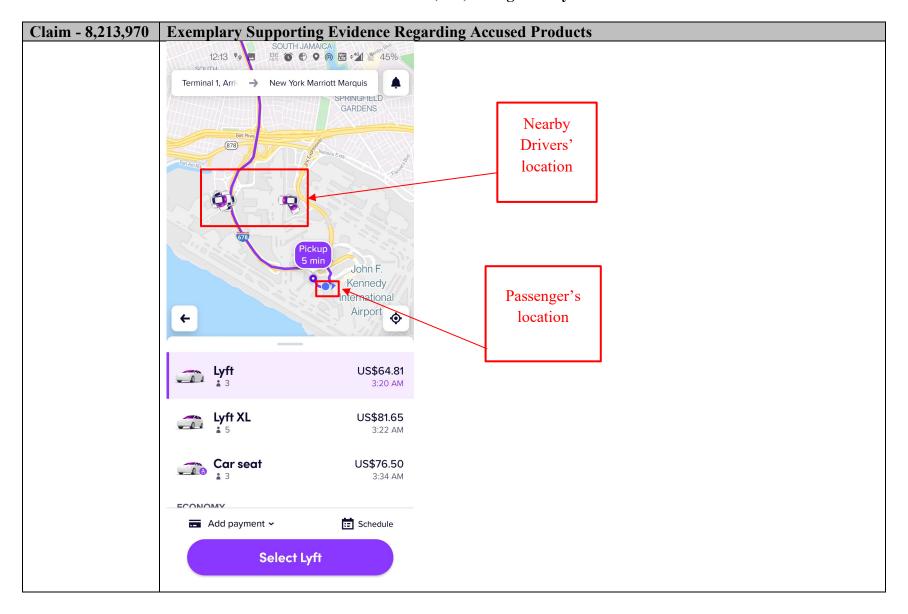


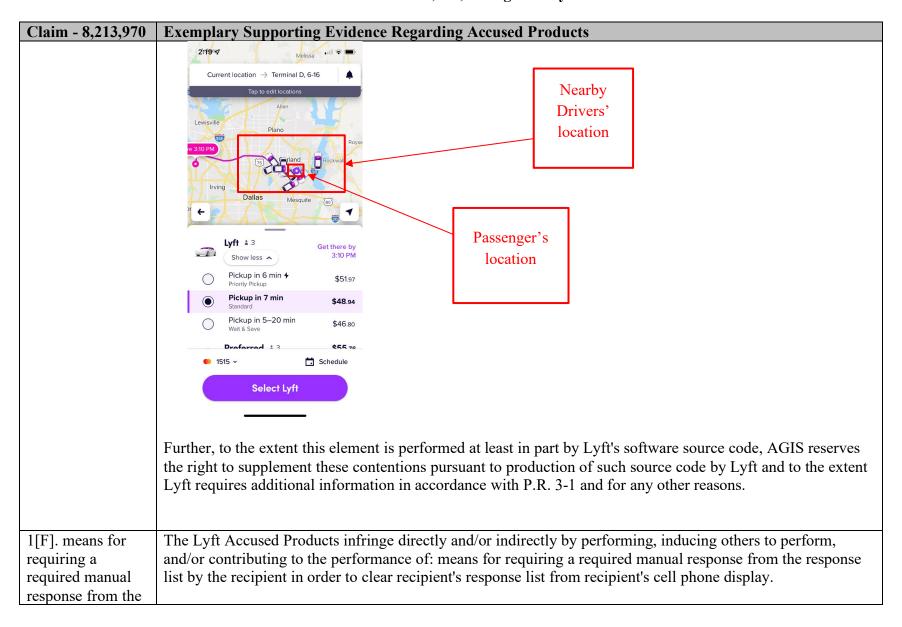


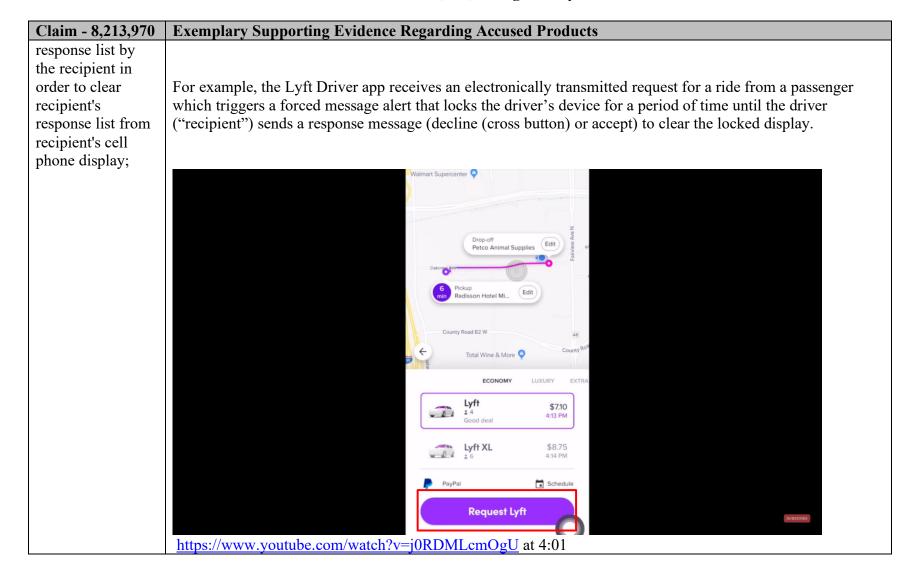


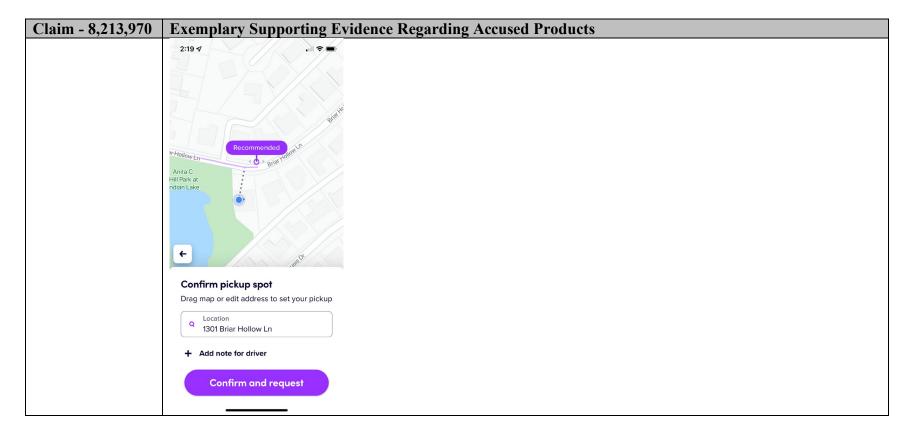


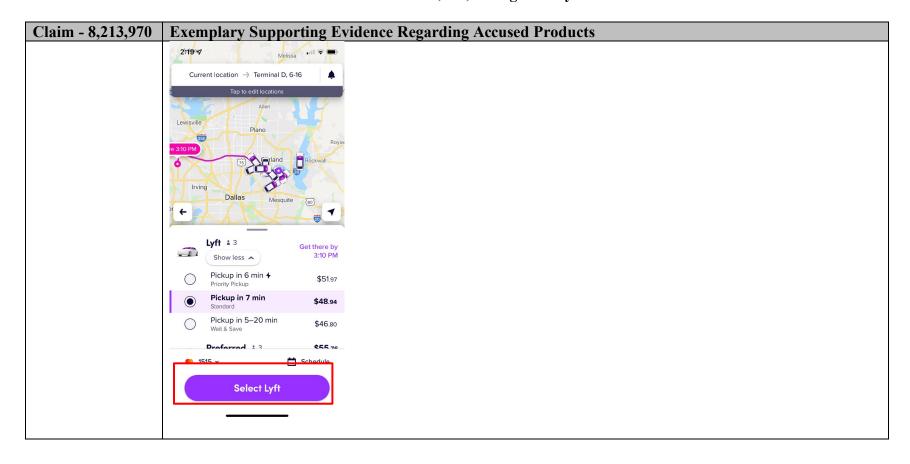


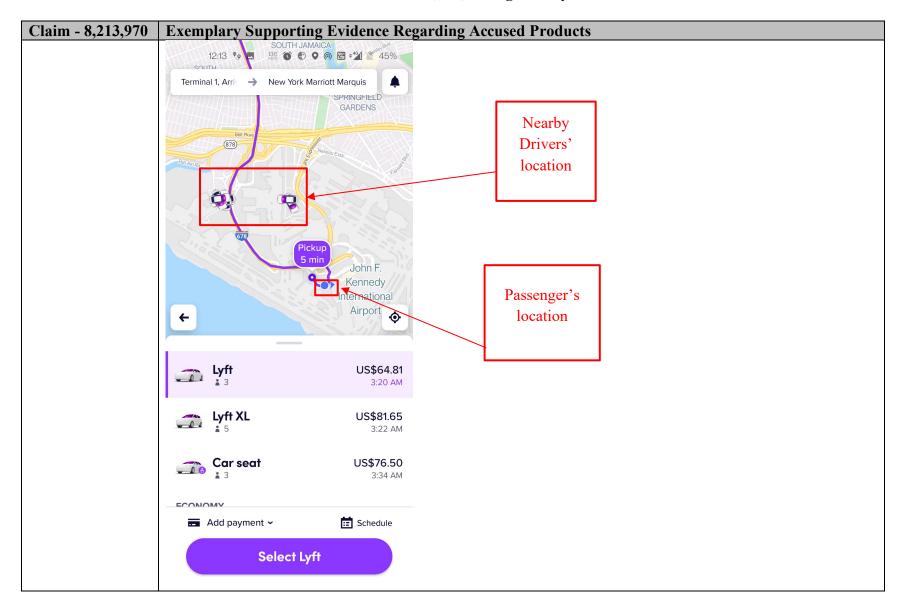


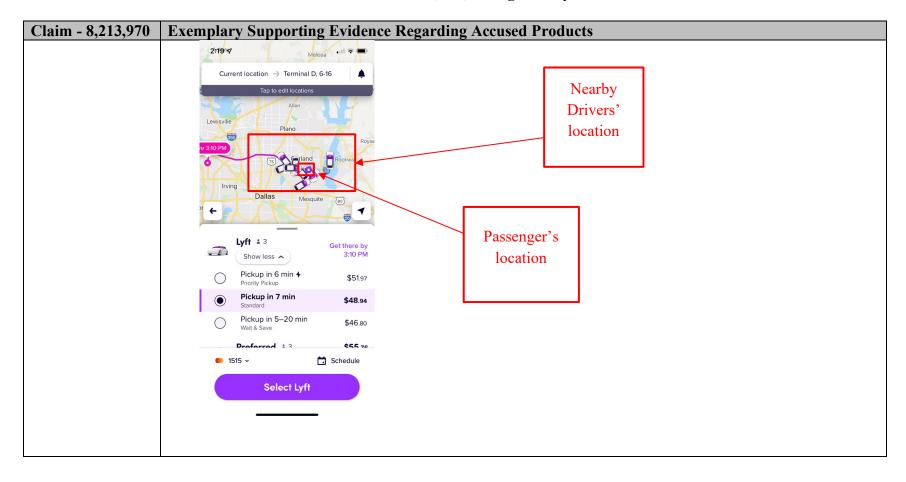


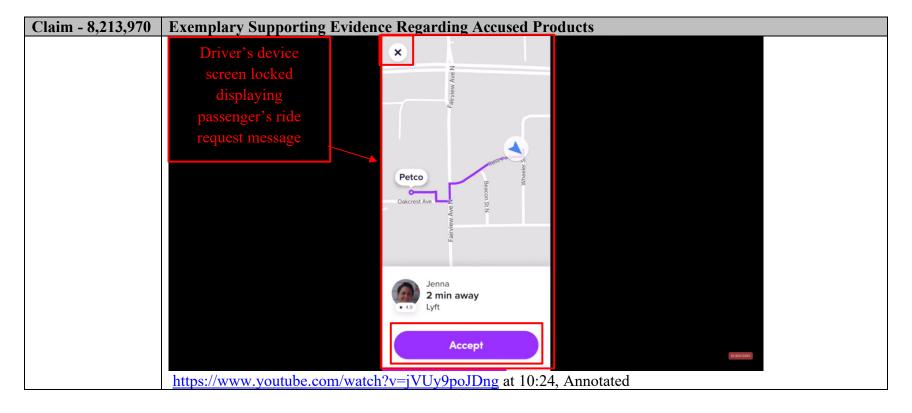


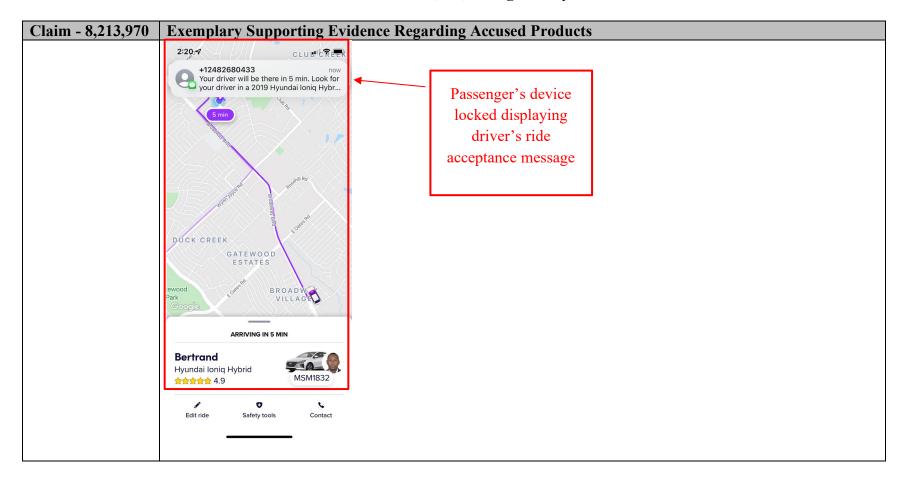


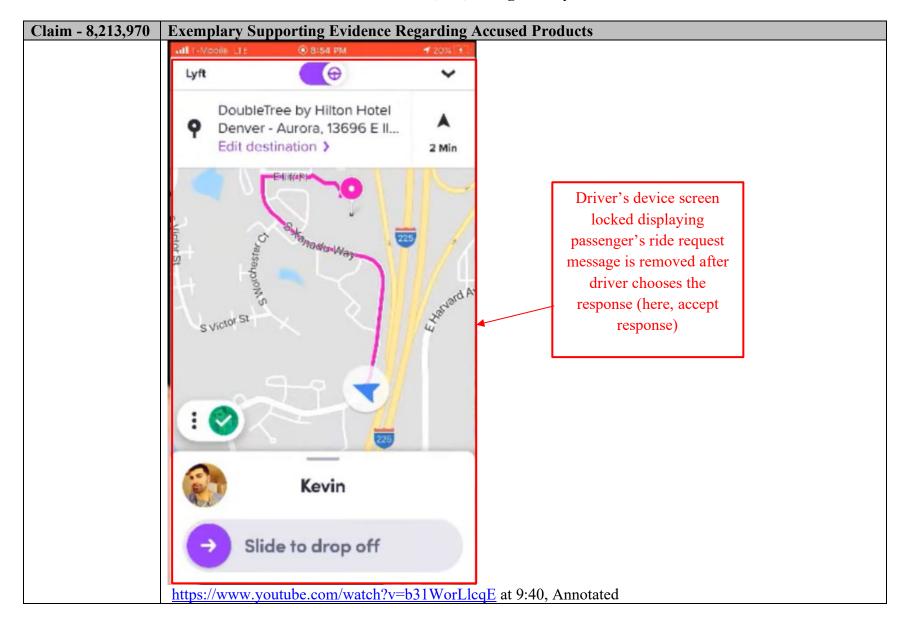


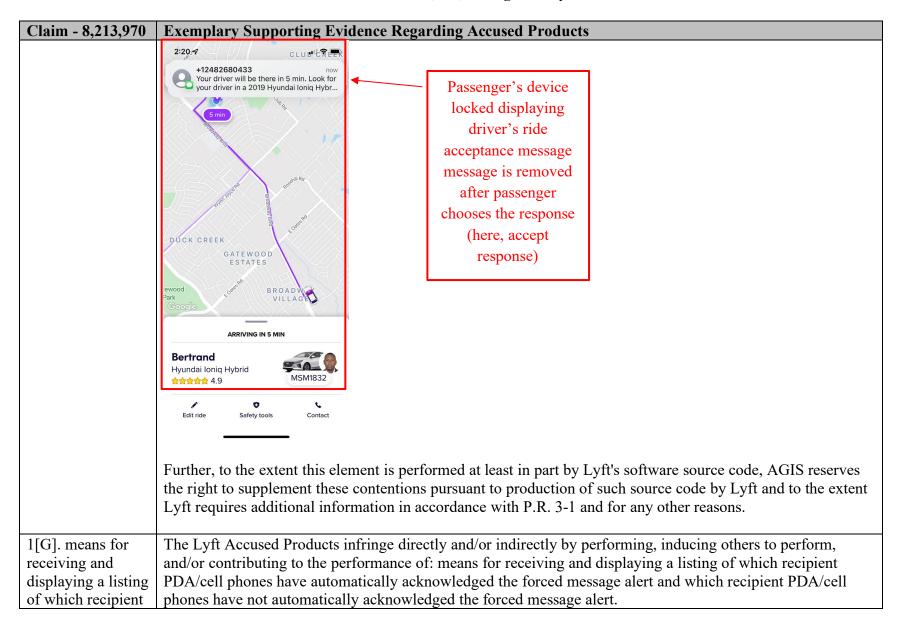


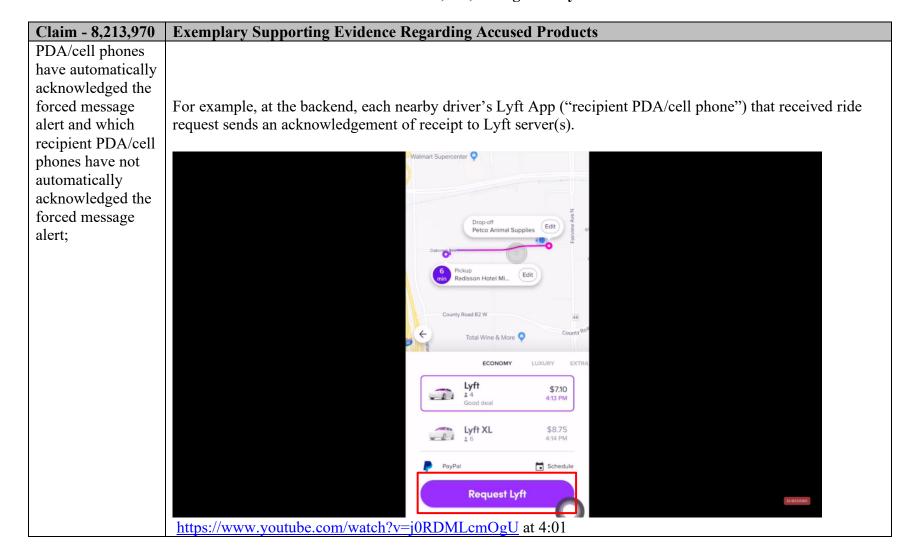


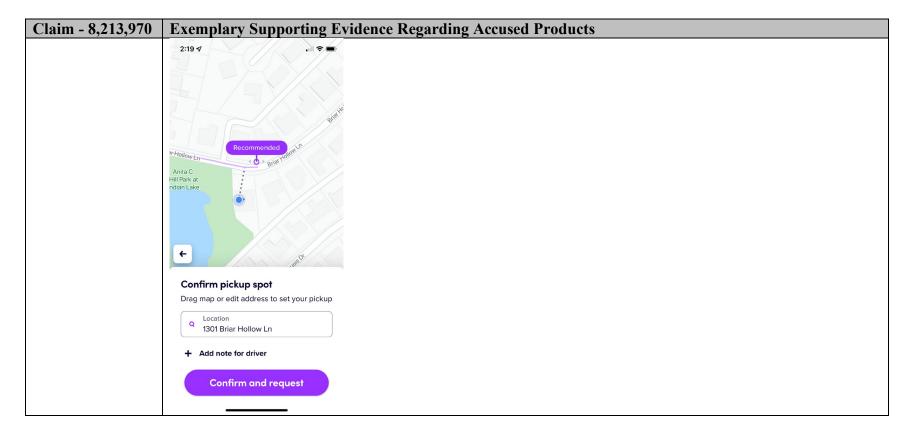


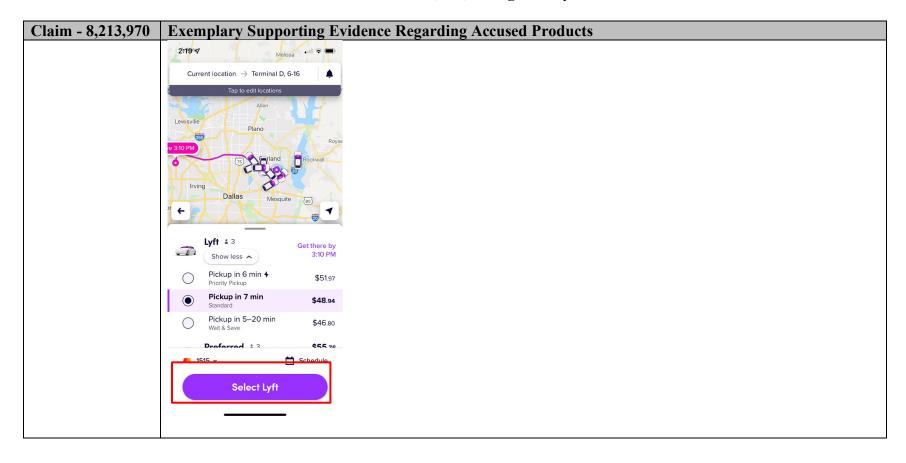


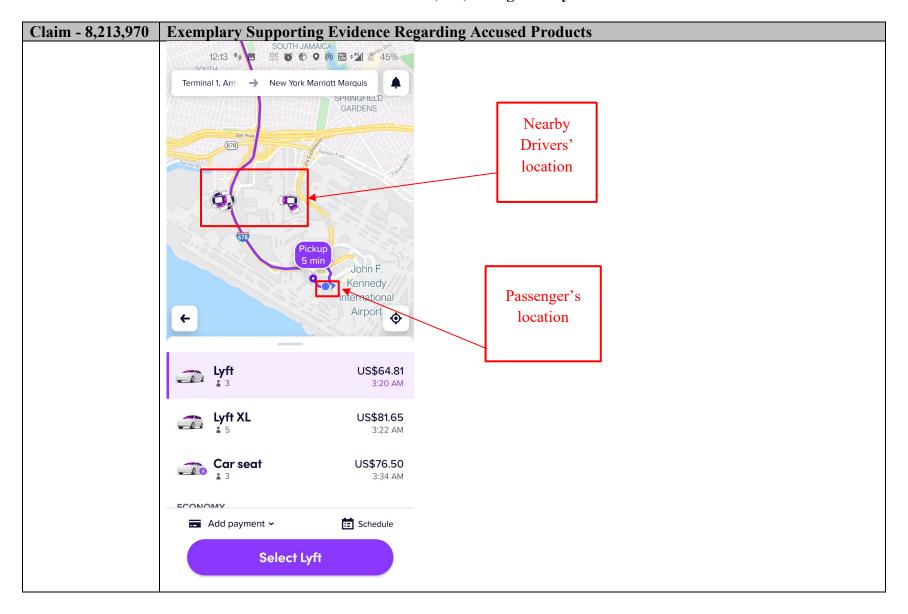


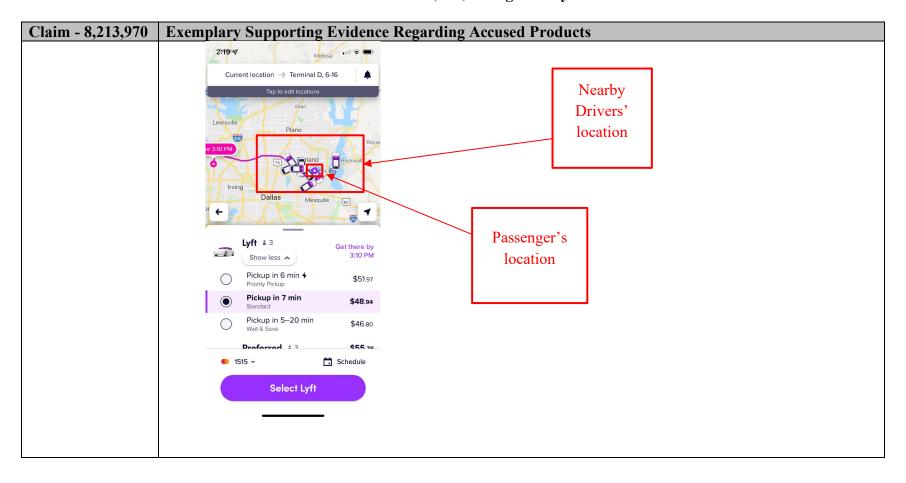


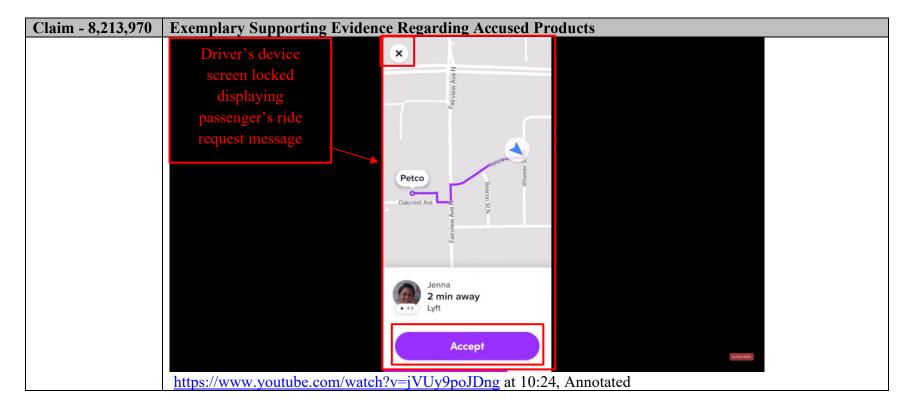


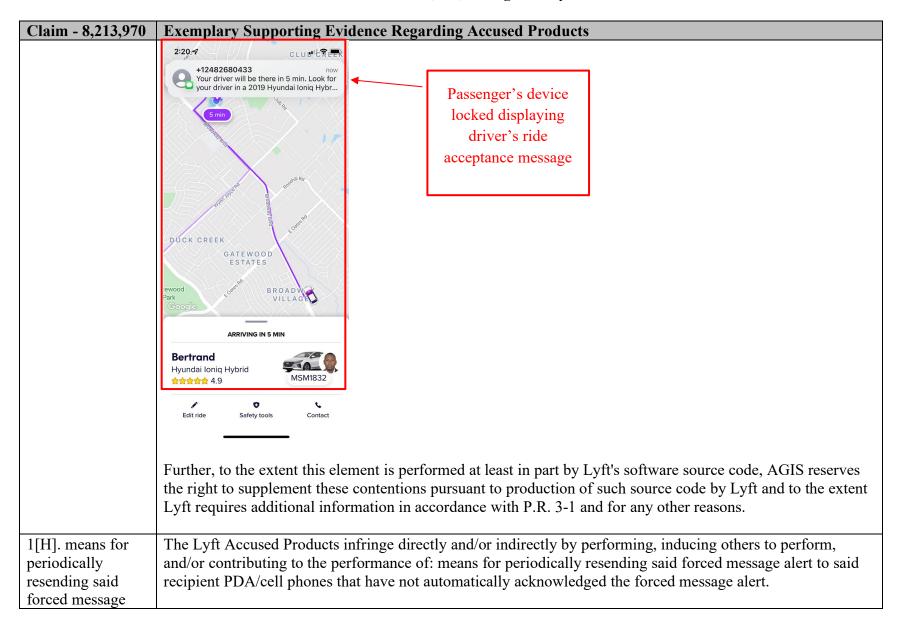




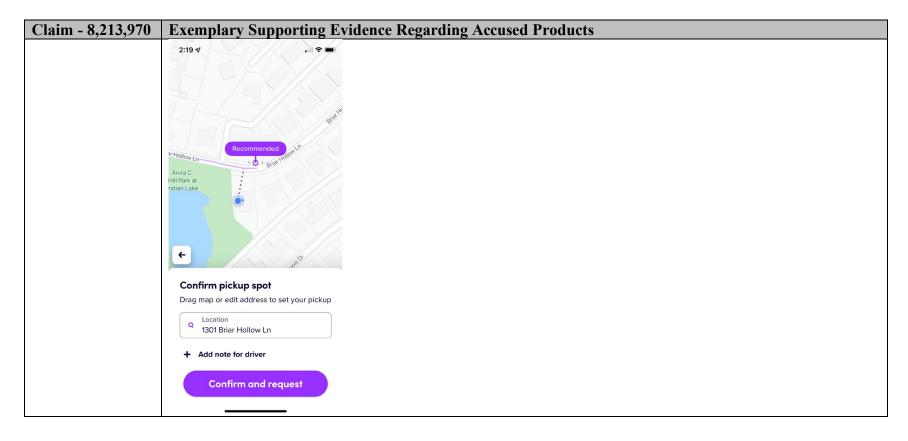


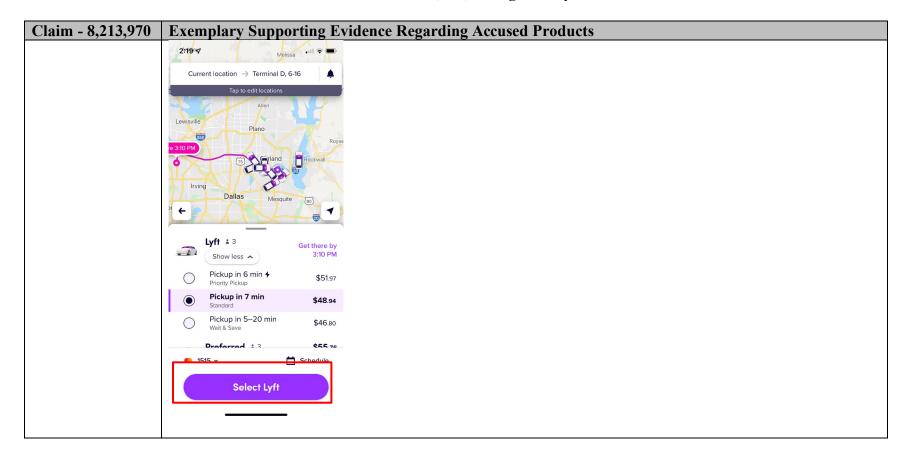


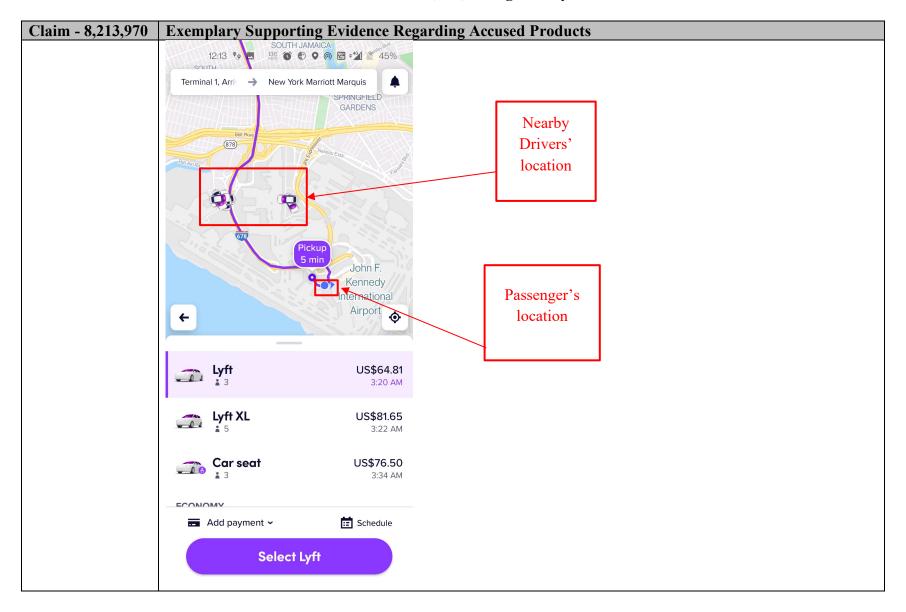


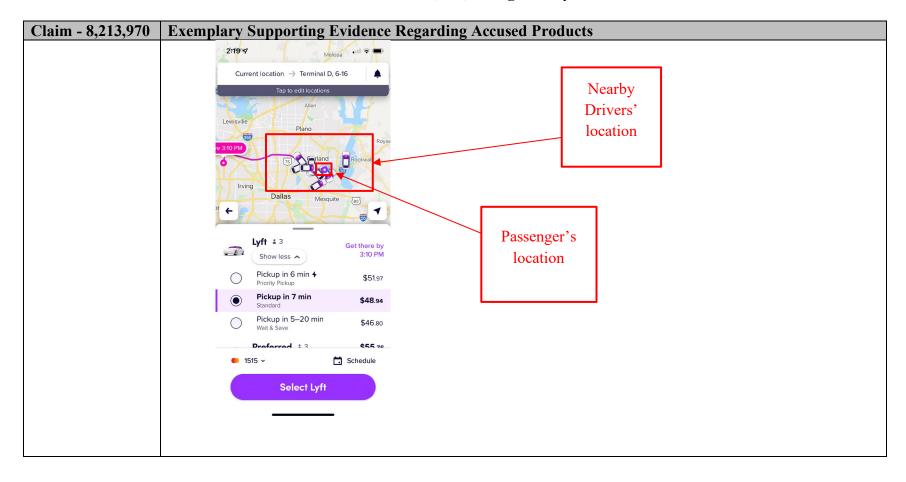


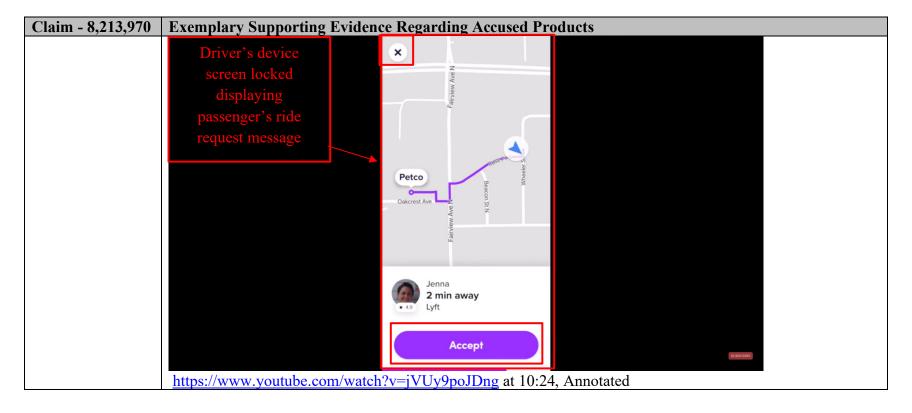
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
alert to said recipient PDA/cell phones that have not automatically acknowledged the forced message alert; and	For example, at the backend, each nearby driver's Lyft app that received ride request sends an acknowledgement of receipt to Lyft server(s). Therefore, the second communication of the ride request is sent to those drivers' Lyft app who did not acknowledge the ride request message. This communication of ride request is periodically sent until the ride is accepted by any driver.
	Drop-off Petco Animal Supplies Edit Obscrat & se
	County Road B2 W Total Wine & More County Road County Road B2 W
	Lyft \$7.10 \$4 4.13 PM
	Lyft XL \$8.75 4.14 PM
	Request Lyft https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01

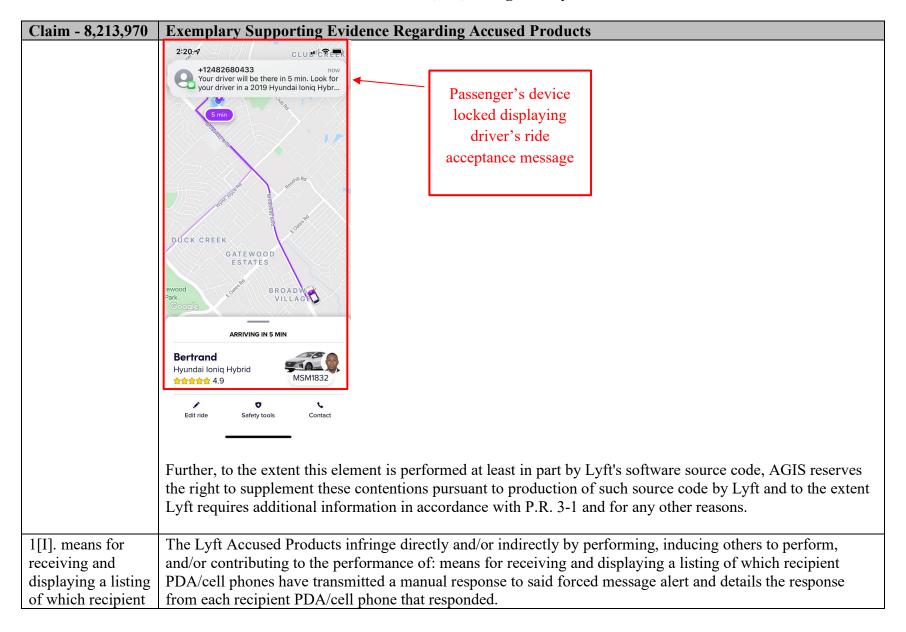






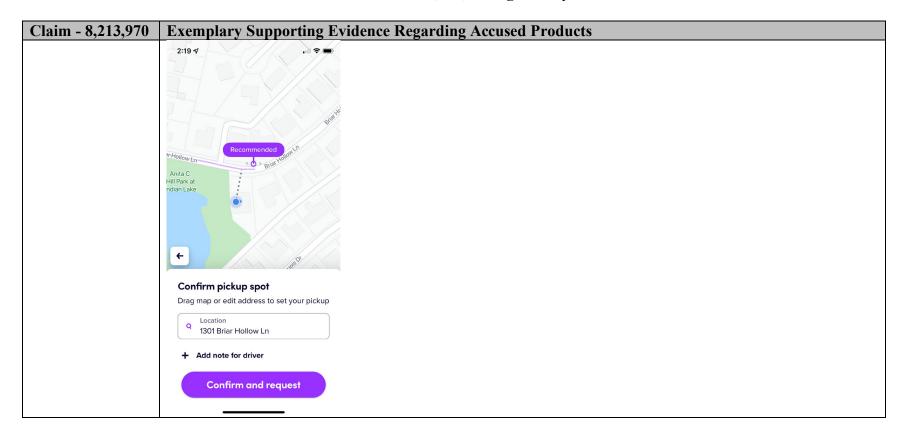


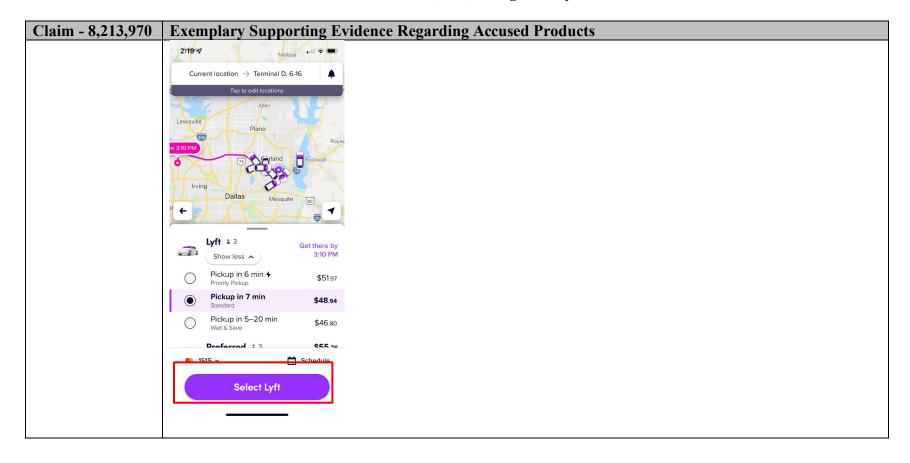


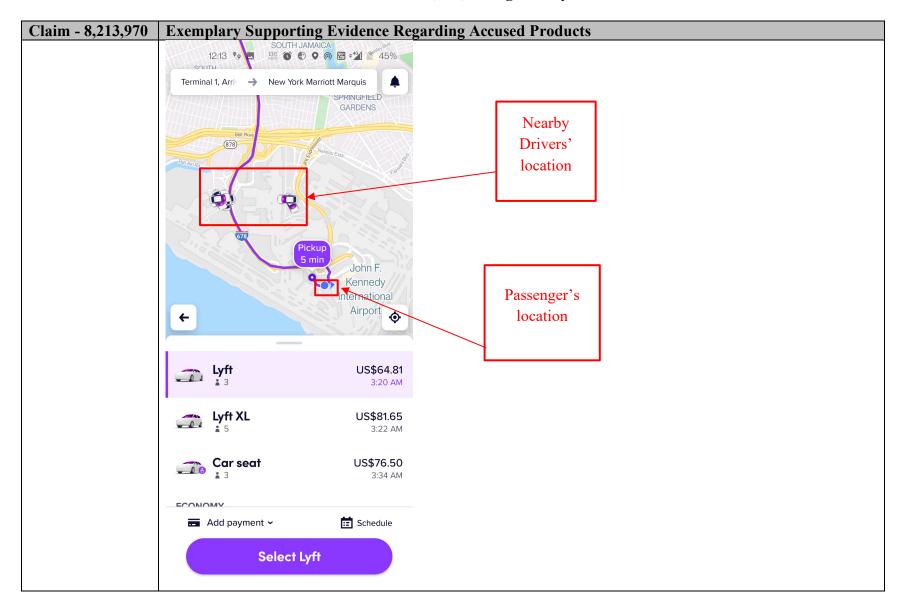


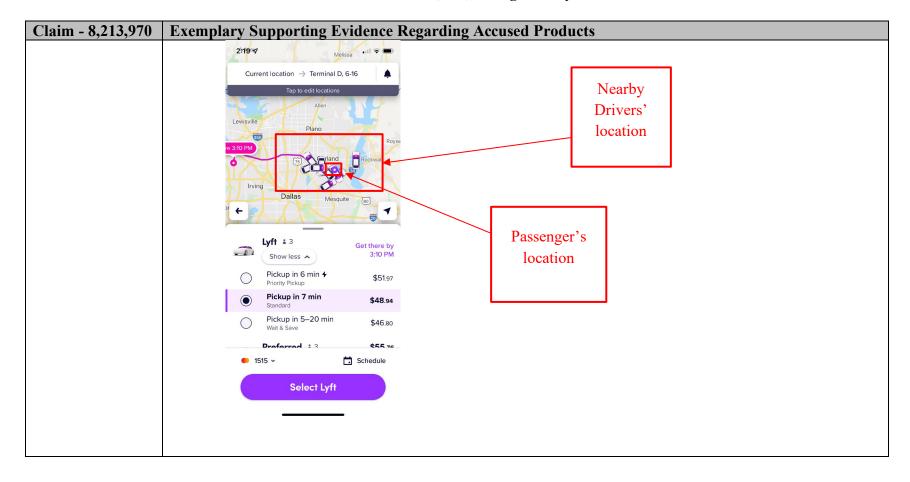
Attachment D for US Patent No. 8,213,970 Against Lyft Accused Products

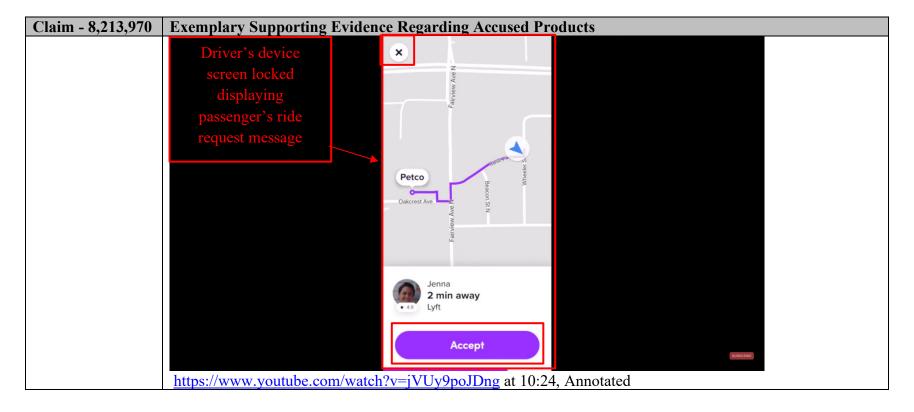
Claim - 8,213,970 **Exemplary Supporting Evidence Regarding Accused Products** PDA/cell phones have transmitted a manual response to said forced For example, at the backend, a list of all the drivers' Lyft app that transmitted the response to a ride request message of a passenger are maintained at Lyft's server(s). This ensures that drivers who declined the ride do message alert and details the not further receive the ride request of the same passenger in case the ride request has not been responded to and matches the driver to the passenger if the driver accepts the request. Therefore, Lyft's server(s) maintain a response from each recipient record of the responses from each of the drivers. PDA/cell phone that responded. Total Wine & More Lyft ± 4 \$7.10 4:13 PM Lyft XL \$8.75 4:14 PM Schedule Request Lyft https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01

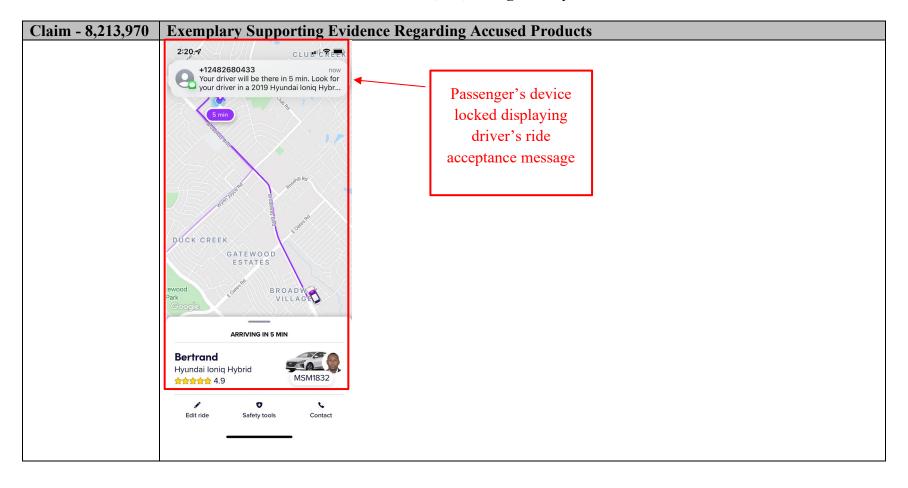


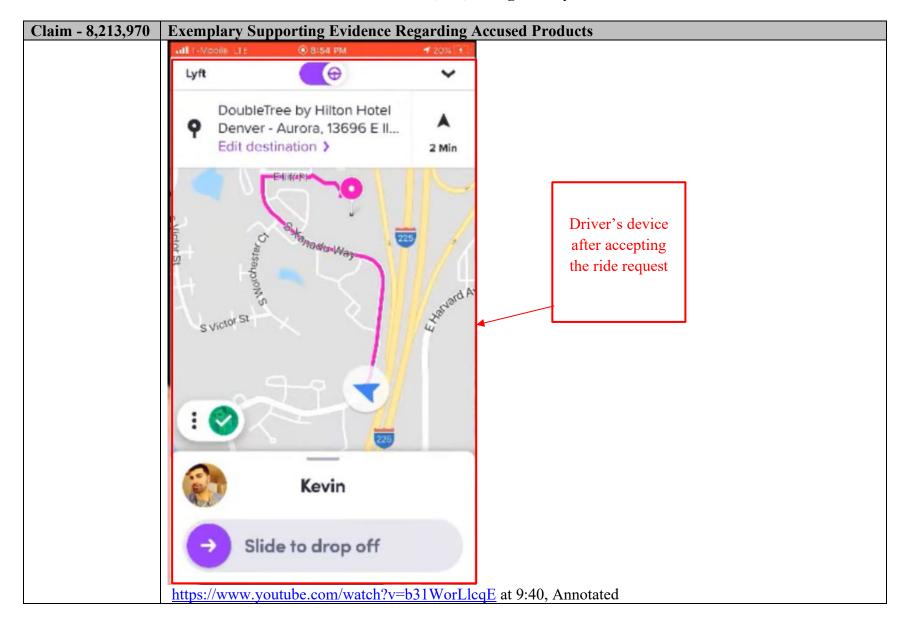


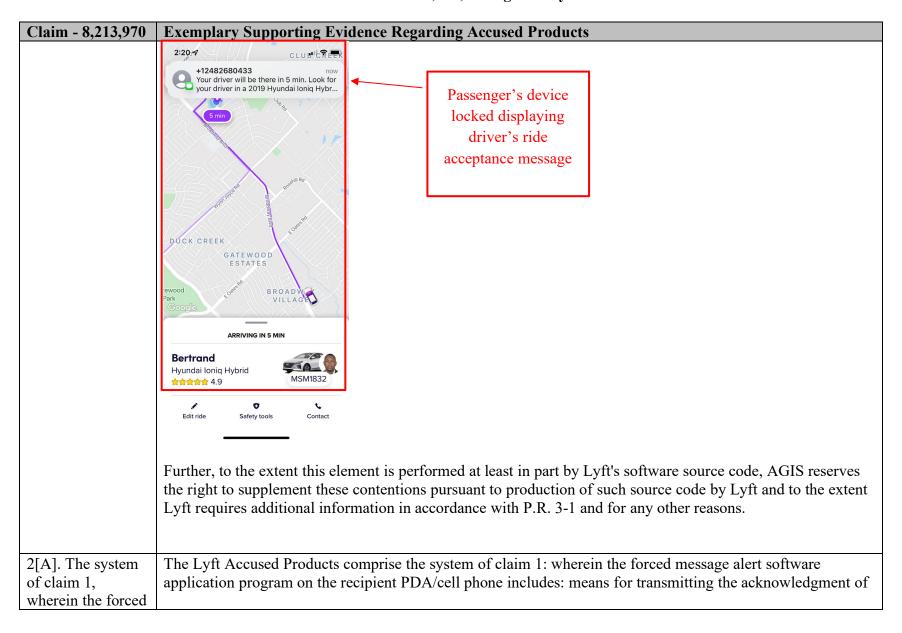






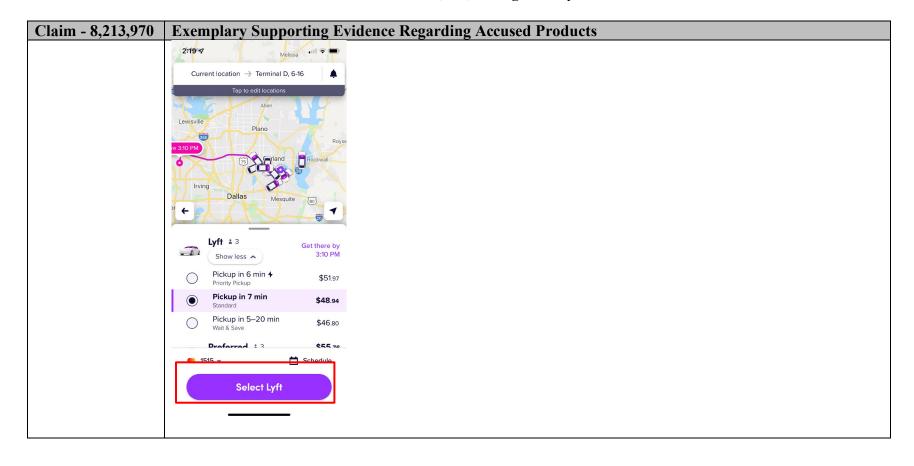


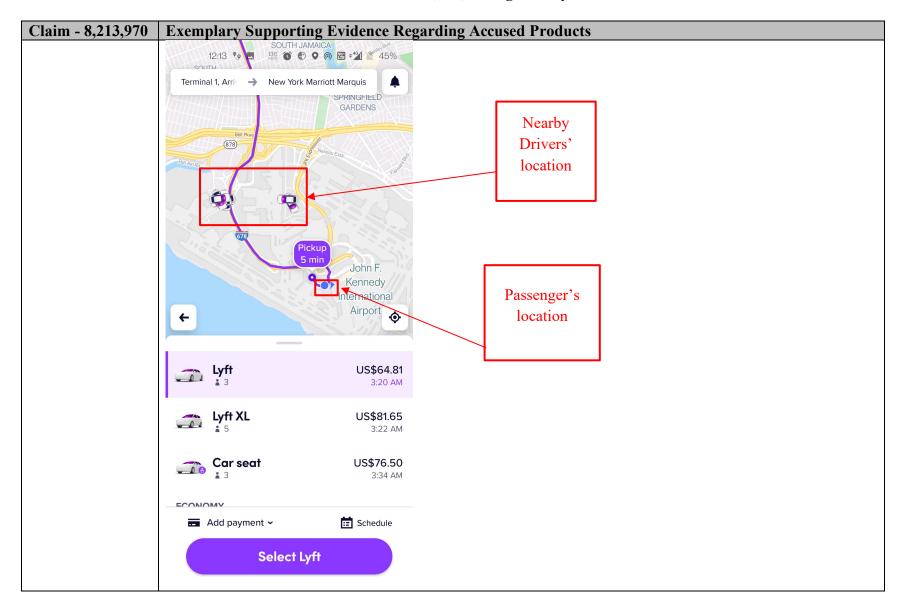


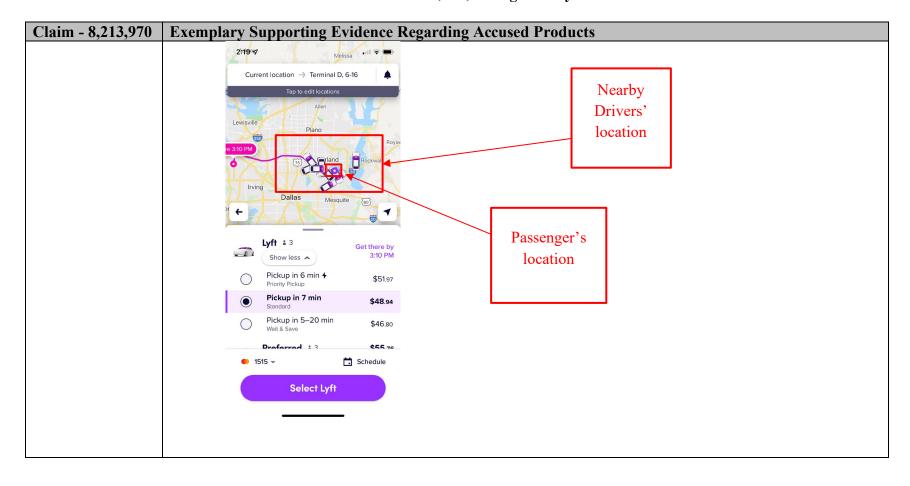


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
message alert	receipt to said sender PDA/cell phone immediately upon receiving a forced message alert from the sender
software	PDA/cell phone.
application	
program on the	
recipient PDA/cell	
phone includes:	For example, at the backend, the Lyft driver app in each nearby driver's Lyft app that received a ride request
means for	sends an acknowledgement of receipt to Lyft's server and further to the passenger's Lyft app.
transmitting the acknowledgment	Walmart Supercenter Q
of receipt to said	
sender PDA/cell	
phone	Drop-off 2
immediately upon	Petco Animal Supplies Edit
receiving a forced	Osiscrapt from
message alert from	6 Pickup Radisson Hotel Mi Edit
the sender	
PDA/cell phone;	County Road B2 W
	Total Wine & More County Res
	ECONOMY LUXURY EXTRA
	Lyft \$7.10
	Good deal
	Lyft XL \$8.75 414 PM
	PayPal Schedule
	Request Lyft
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01

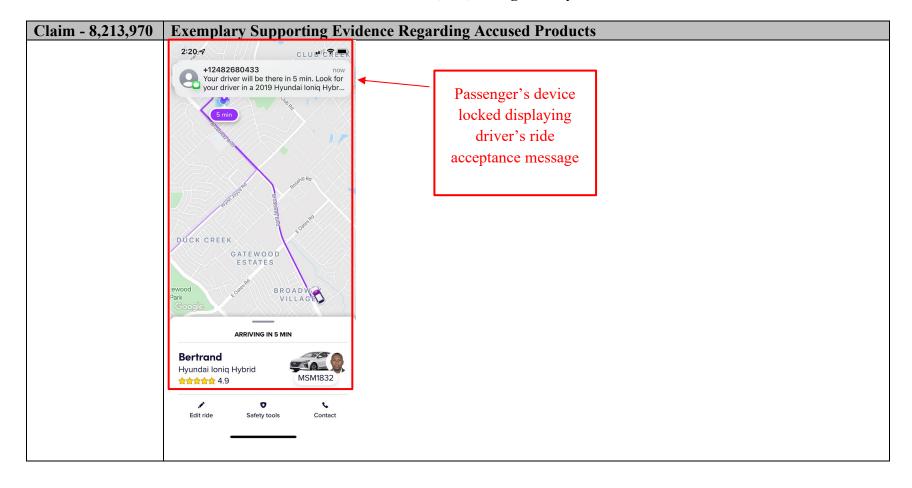
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
3,210,9770	2:19 4 Recommended Ania C Hill Park at notion Lake
	Confirm pickup spot Drag map or edit address to set your pickup Location 1301 Briar Hollow Ln + Add note for driver Confirm and request

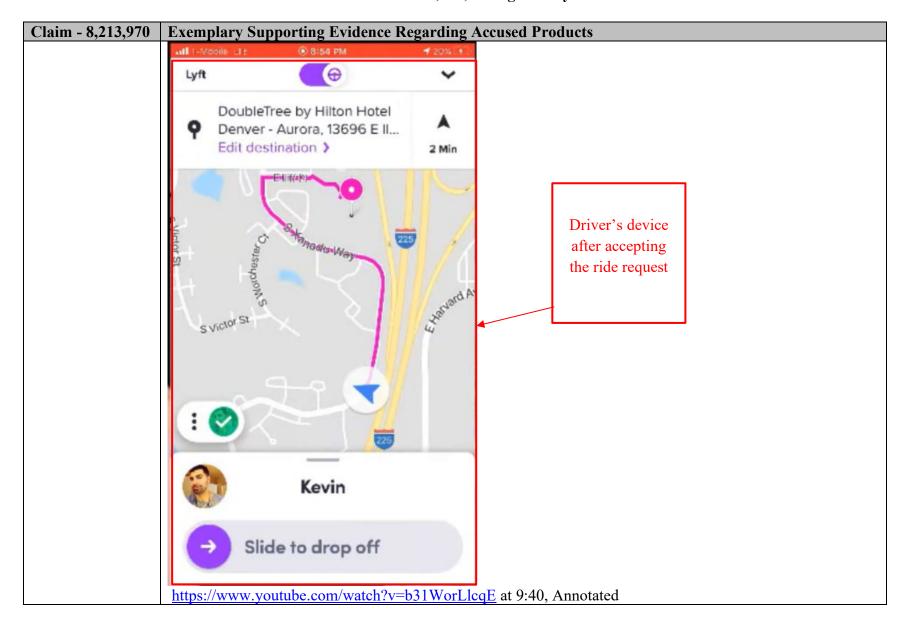


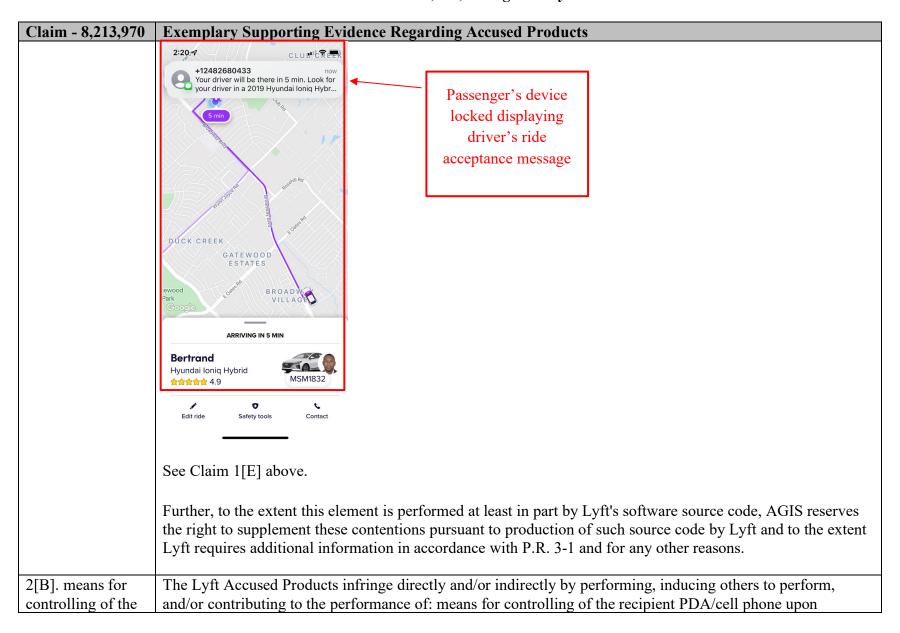








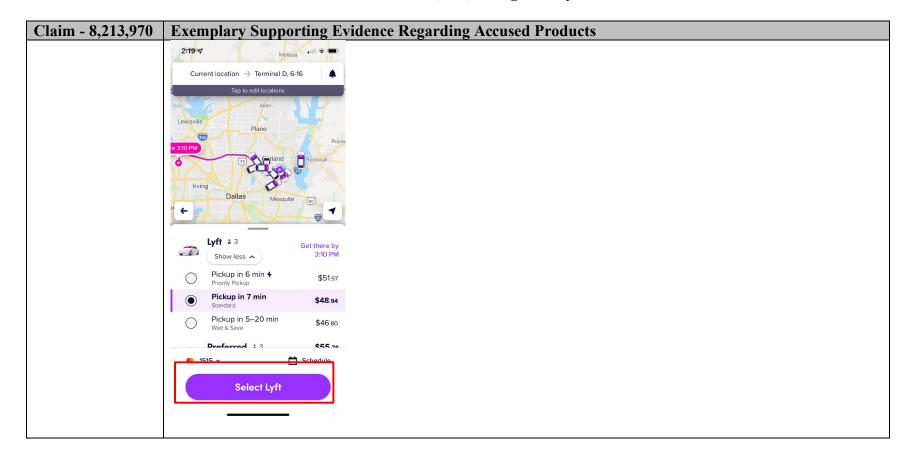


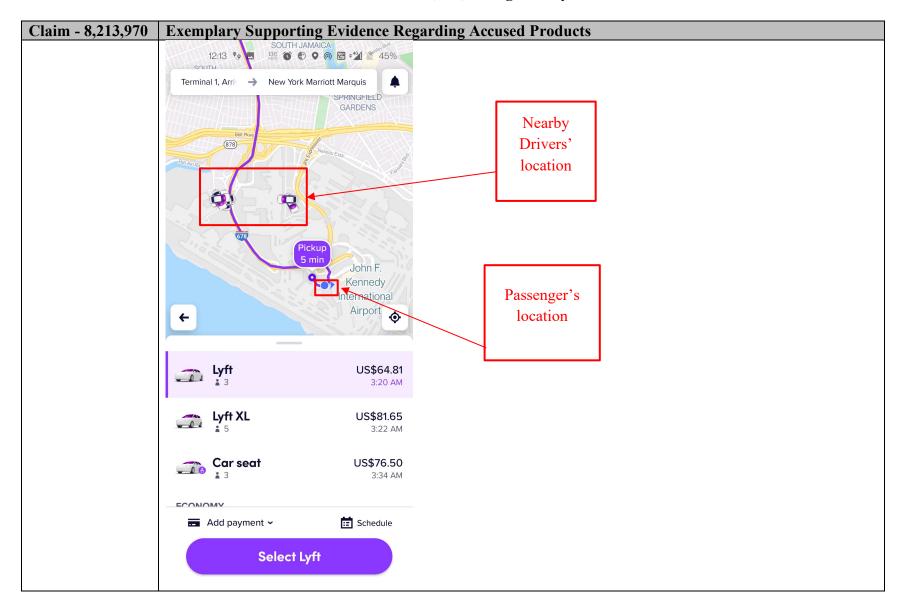


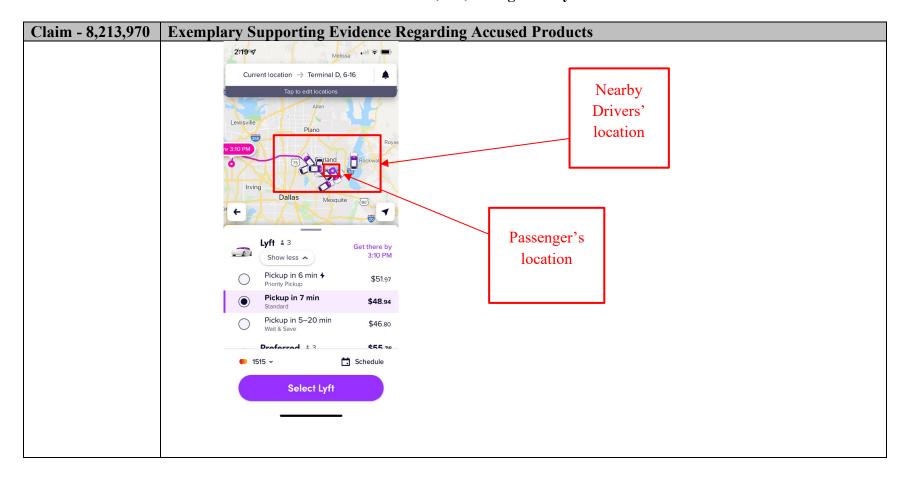
Attachment D for US Patent No. 8,213,970 Against Lyft Accused Products

Claim - 8,213,970 **Exemplary Supporting Evidence Regarding Accused Products** recipient PDA/cell transmitting said automatic acknowledgment and causing, in cases where the force message alert is a text message, the text message and a response list to be shown on the display of the recipient PDA/cell phone or phone upon transmitting said causes, in cases where the forced message alert is a voice message, the voice message being periodically automatic repeated by the speakers of the recipient PDA/cell phone while said response list is shown on the display acknowledgment and causing, in cases where the force message For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger which triggers a forced message alert that locks the driver's Lyft app for a period of time until the driver sends alert is a text message, the text a response message (decline (cross button) or accept) to clear the locked display. message and a response list to be shown on the display of the recipient PDA/cell phone or causes, in cases where the forced message alert is a voice message, the voice message being Total Wine & More periodically repeated by the speakers of the \$7.10 recipient PDA/cell 4:13 PM phone while said Lyft XL \$8.75 response list is shown on the Schedule display **Request Lyft**

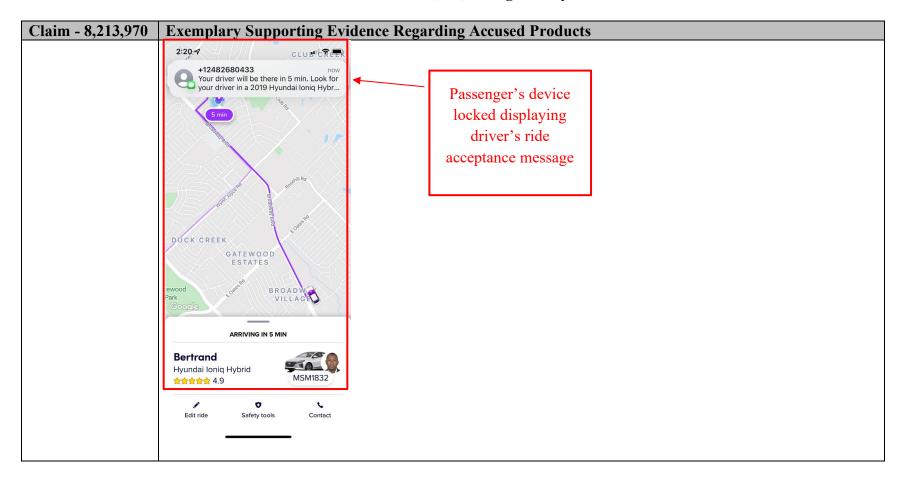
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01
	2:19 4
	age the second s
	Recommended Repair Hollow Ln
	Anita C. Hill Park at ndian Liake
	← Jegt
	Confirm pickup spot
	Drag map or edit address to set your pickup
	Q Location 1301 Briar Hollow Ln
	+ Add note for driver
	Confirm and request

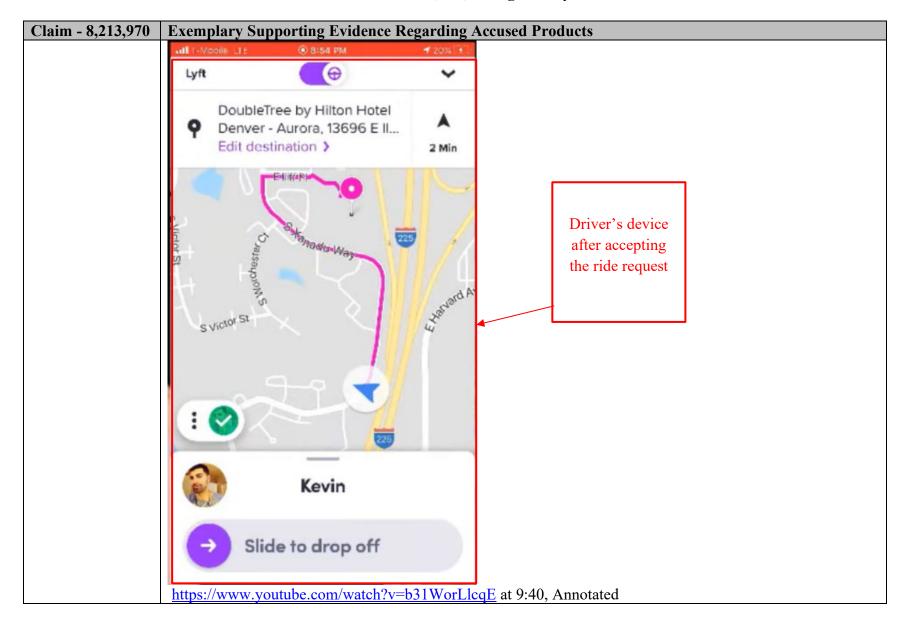


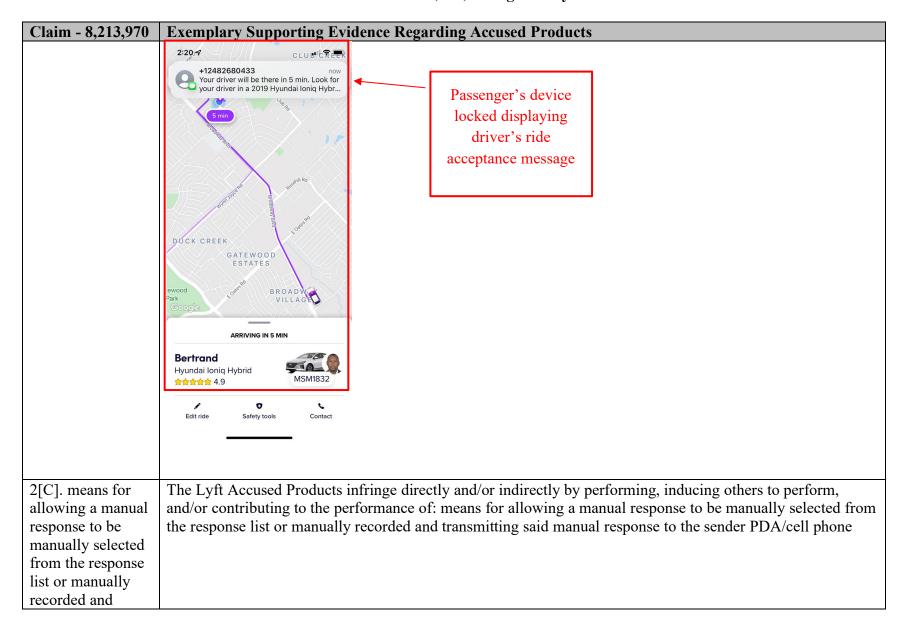


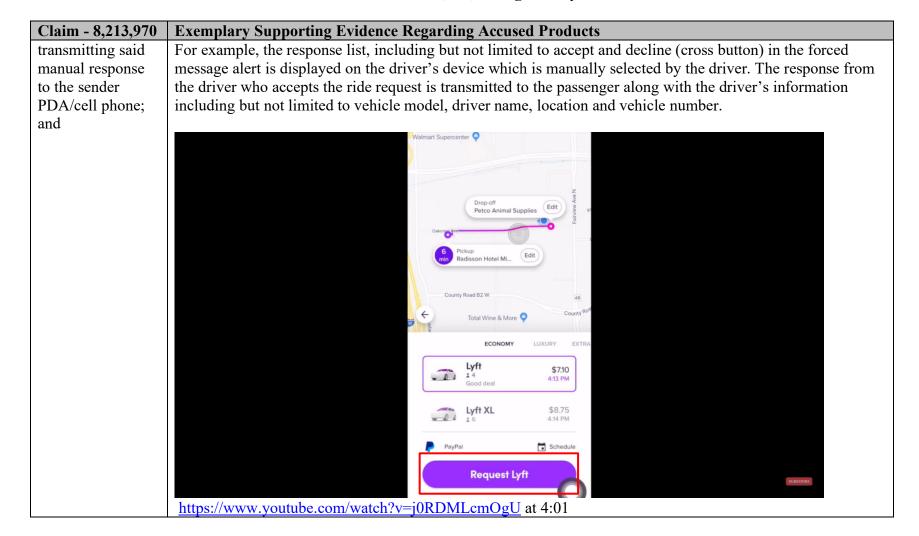




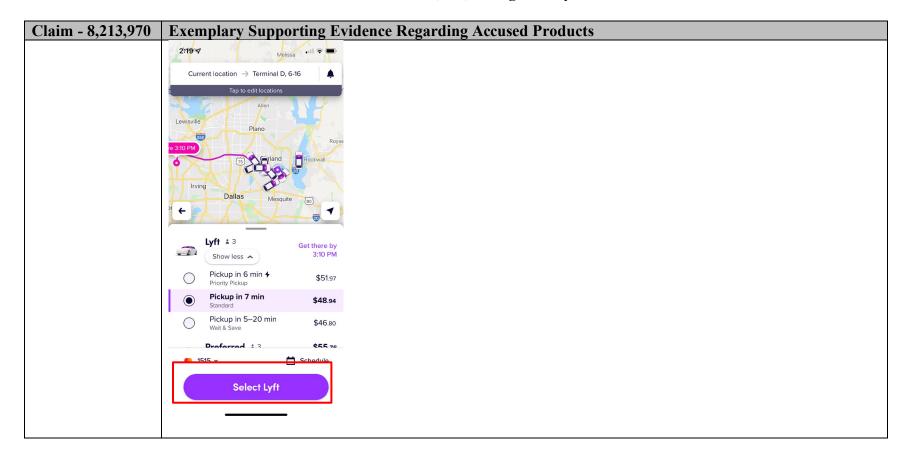


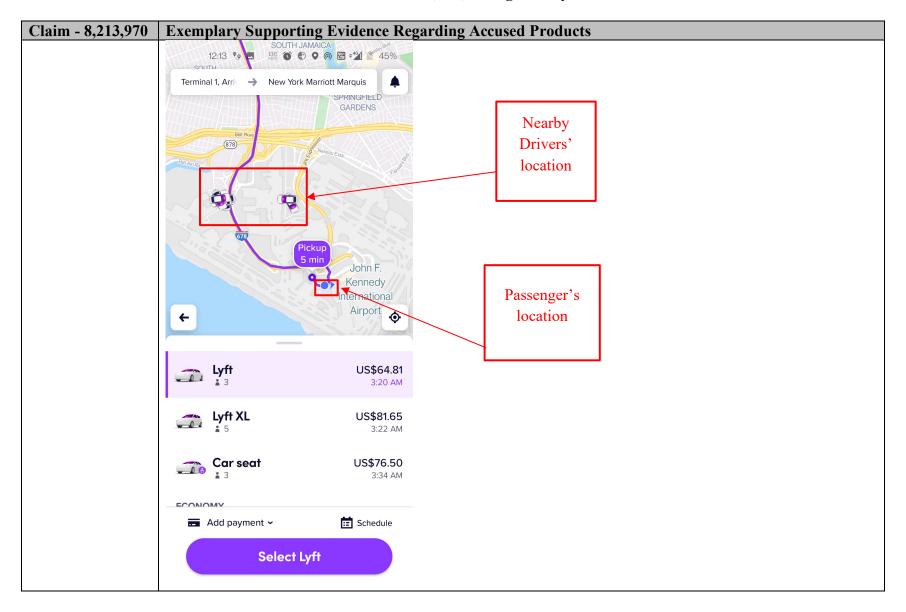


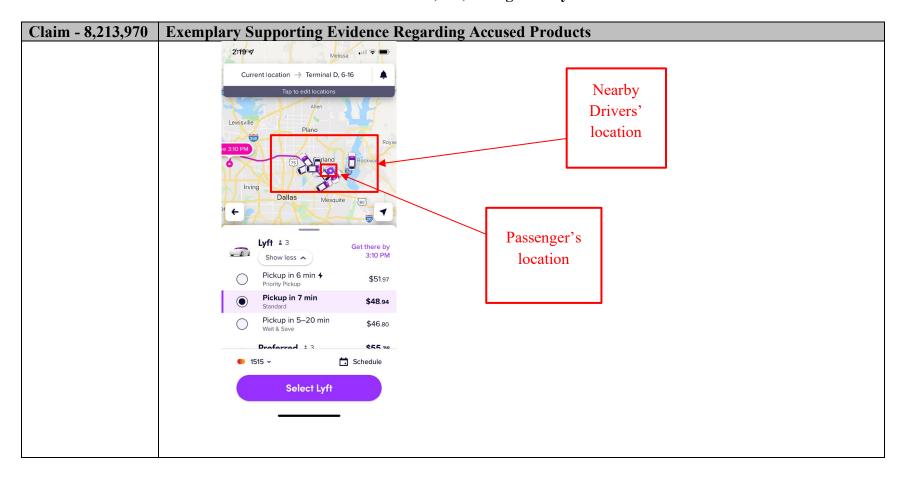




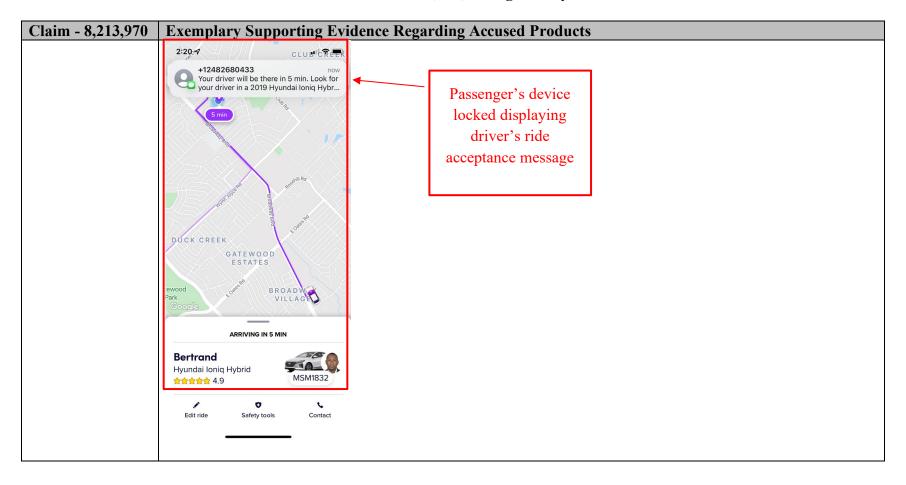
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
3,210,9770	2:19 4 Recommended Ania C Hill Park at notion Lake
	Confirm pickup spot Drag map or edit address to set your pickup Location 1301 Briar Hollow Ln + Add note for driver Confirm and request

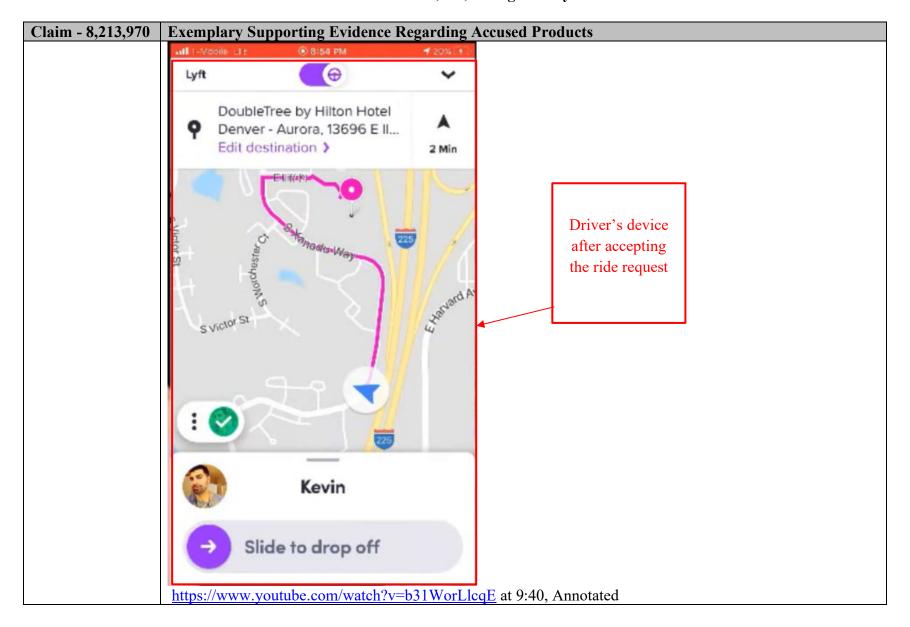


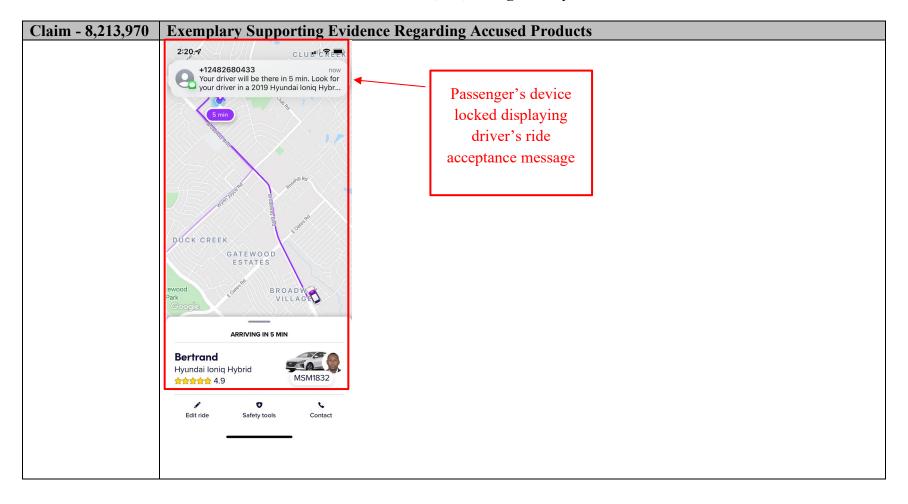


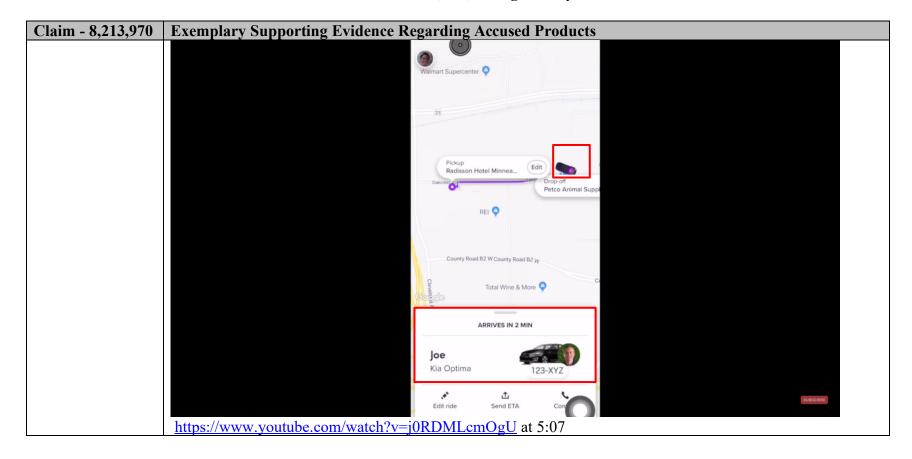


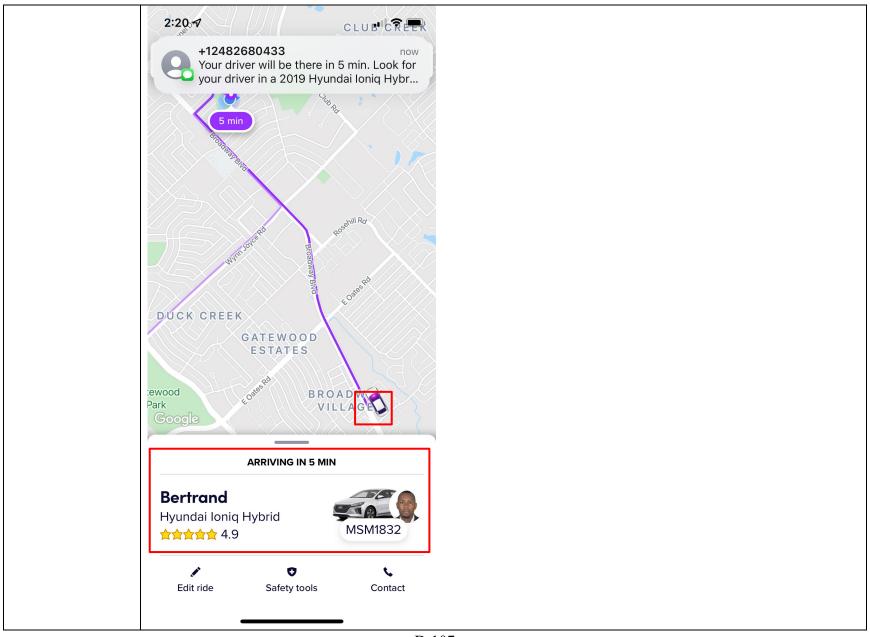




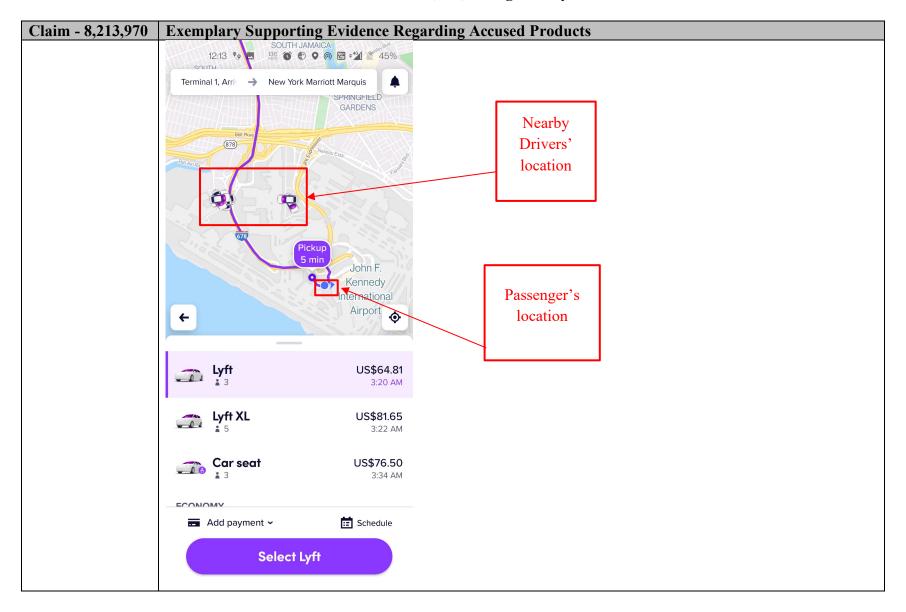


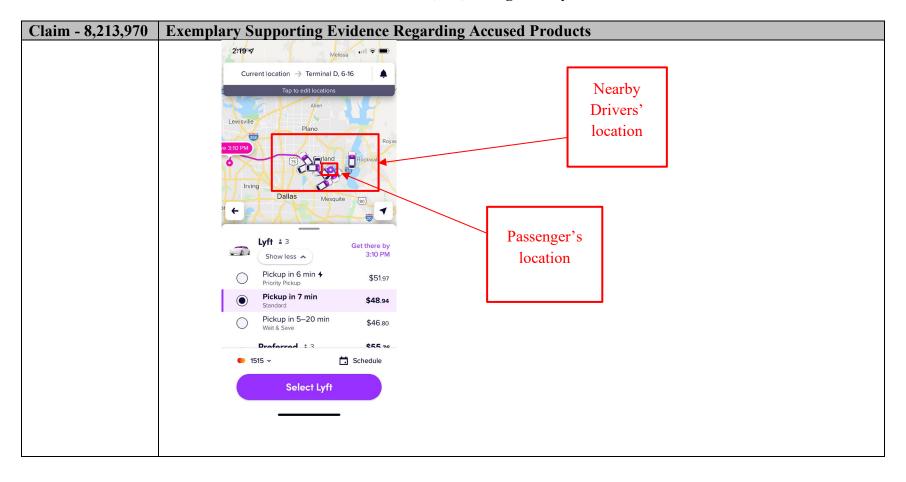


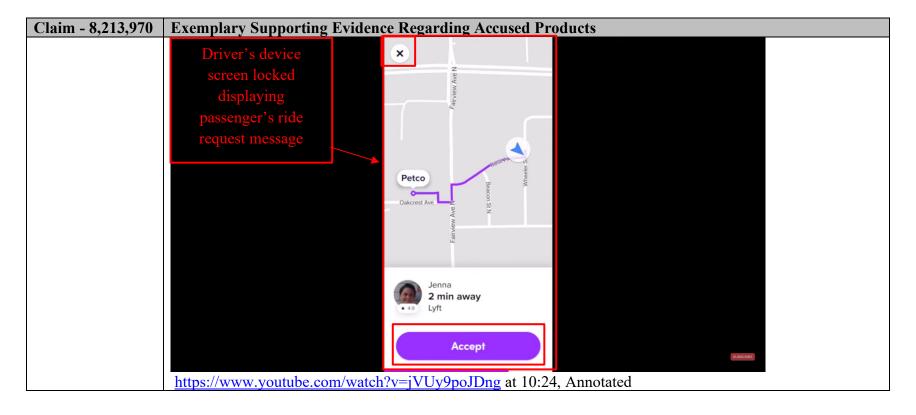


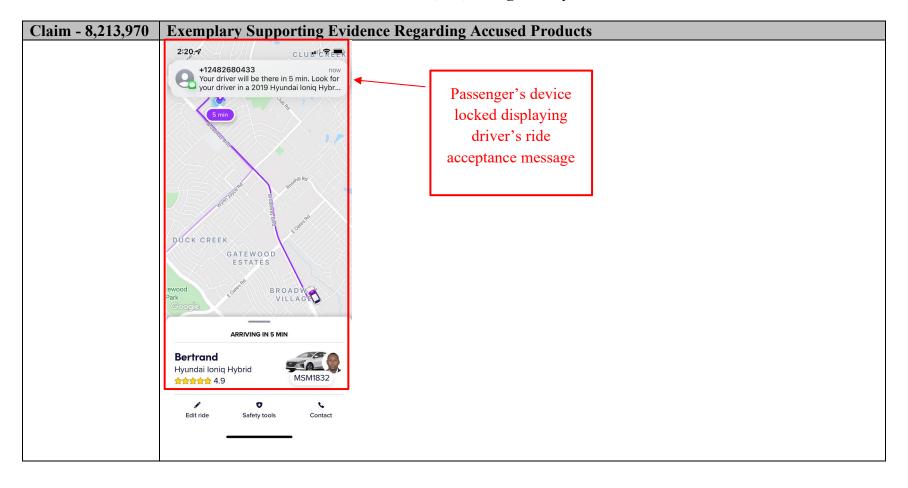


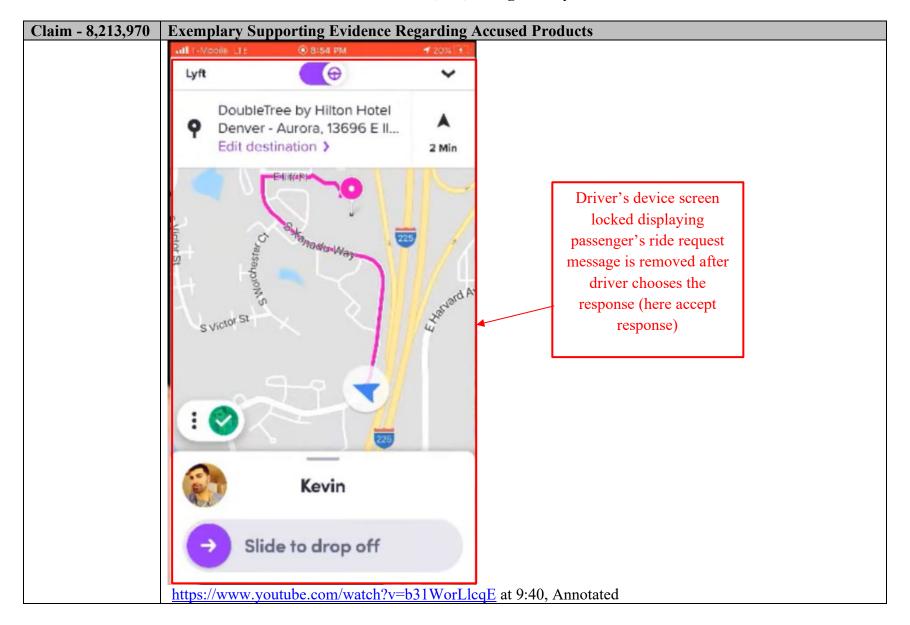
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	See Claim 1[E] above.
2[D]. means for	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
clearing the text	and/or contributing to the performance of: means for clearing the text message and a response list from the
message and a	display of the recipient PDA/cell phone or stopping the repeating voice message and clearing the response list
response list from	from the display of the recipient PDA/cell phone once the manual response is transmitted.
the display of the	
recipient PDA/cell	
phone or stopping	
the repeating voice	For example, the Lyft Driver app receives an electronically transmitted request for a ride from a passenger
message and	which triggers a forced message alert that locks the driver's device ("controlling of the recipient PDA/cell
clearing the	phone") for a period of time until the driver ("recipient") sends a response message (decline (cross button) or
response list from	accept) to clear the locked display.
the display of the	
recipient PDA/cell	
phone once the	
manual response is	
transmitted.	





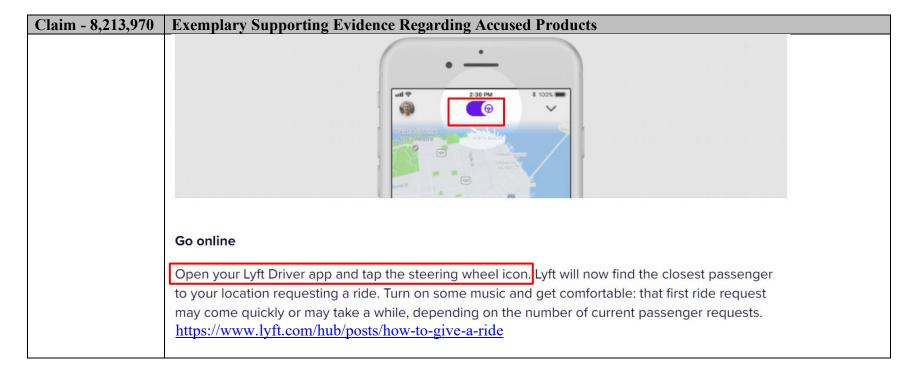


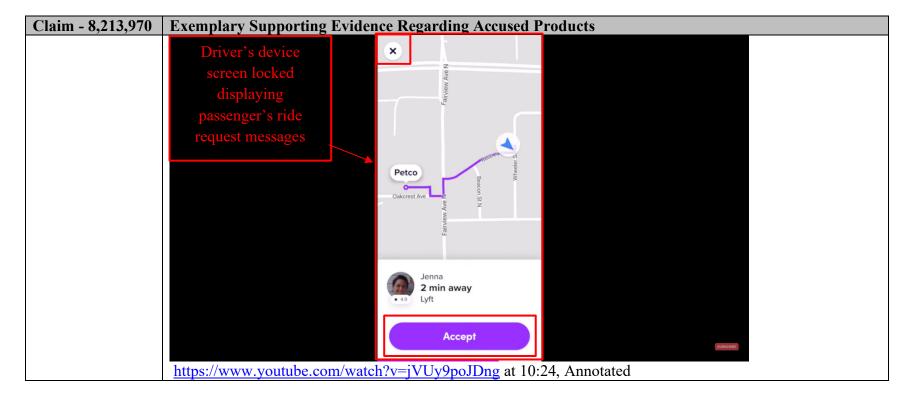


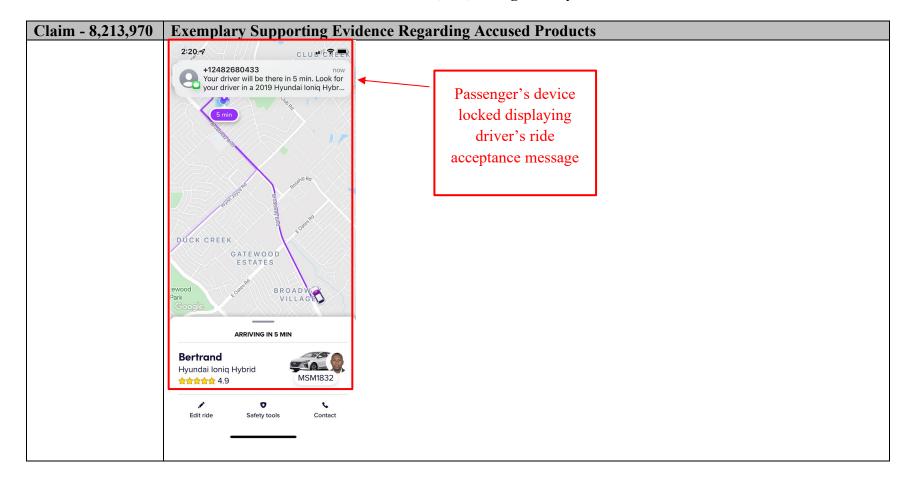


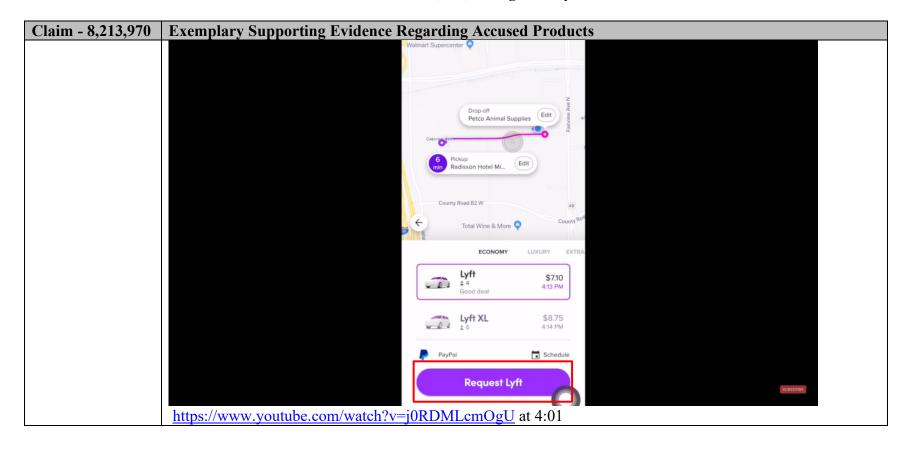
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	See Claim 1[E] above.
10[P]. A method of receiving, acknowledging and responding to a forced message alert from a sender PDA/cell phone to	The Lyft Accused Products performs a computer implemented method as set forth below. Lyft further infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: a method of receiving, acknowledging and responding to a forced message alert from a sender PDA/cell phone to a recipient PDA/cell phone, wherein the receipt, acknowledgment, and response to said forced message alert is forced by a forced message alert software application program.
a recipient PDA/cell phone, wherein the receipt, acknowledgment, and response to said forced message alert is forced by a forced message alert	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel.
software application program, said method comprising the steps of:	A passenger ("sender") requests a ride which is transmitted to the nearby drivers. The Lyft Driver application receives an electronically transmitted request for a ride which triggers a forced message alert that locks the device for a period of time until the driver ("recipient") sends a response message (decline or accept) to clear the locked display ("receiving, acknowledging and responding to a forced message alert").

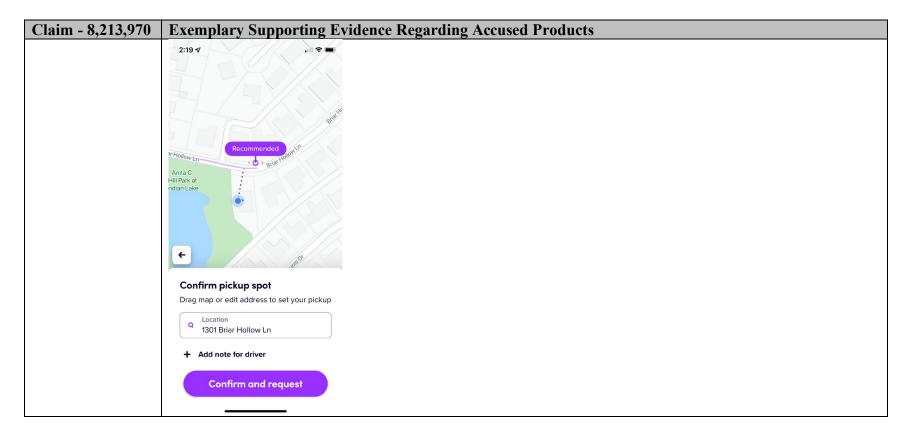
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft



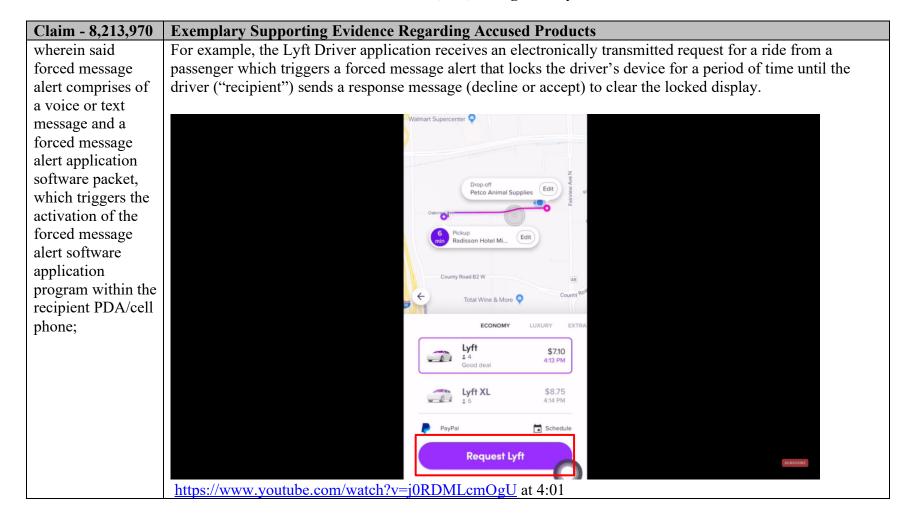


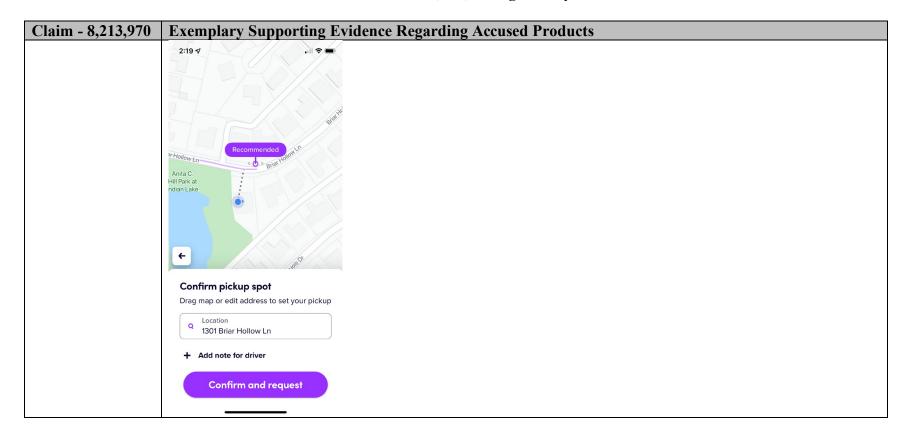


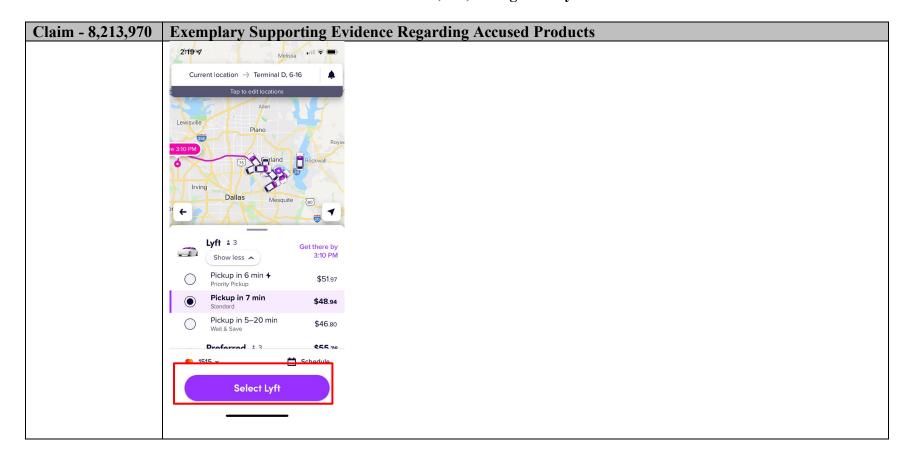


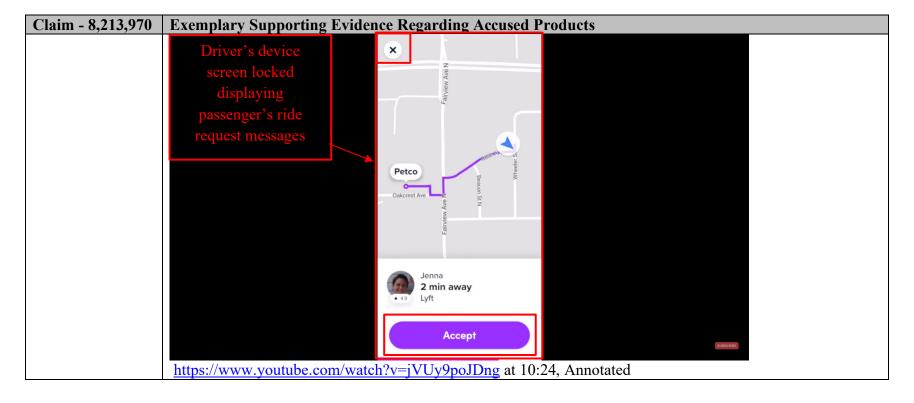


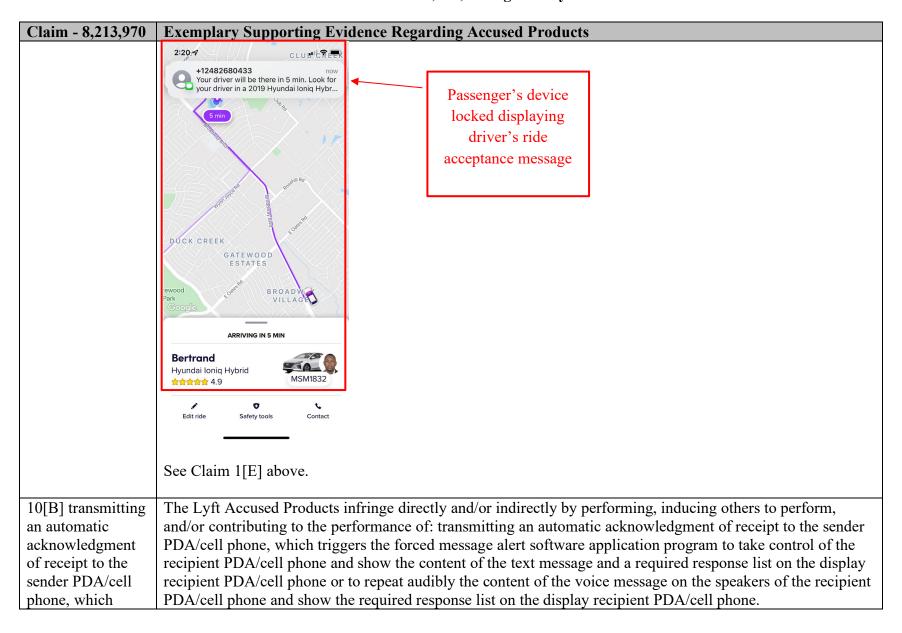
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	Current location → Terminal D, 6-16 Top to edit locations Allen Lewisville Plano Royse Dallas Mesquite So Top to edit locations Royse Royse Royse Royse
	Lyff ± 3 Show less A Show less A Standard Pickup in 6 min 4 Priority Pickup Pickup in 7 min Standard Standard Pickup in 5-20 min Wat & Save Proferred ± 3 Schadule Select Lyft Select Lyft
10[A] receiving an electronically transmitted electronic message; identifying said electronic message as a forced message alert,	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: receiving an electronically transmitted electronic message; identifying said electronic message as a forced message alert, wherein said forced message alert comprises of a voice or text message and a forced message alert application software packet, which triggers the activation of the forced message alert software application program within the recipient PDA/cell phone.



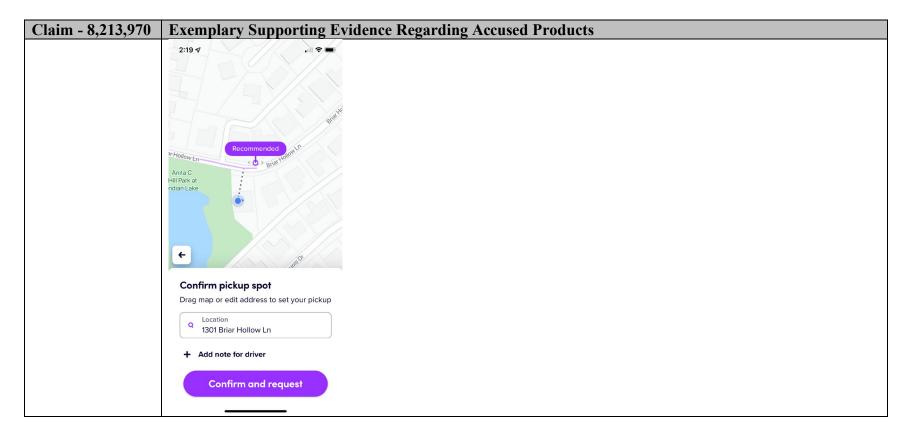


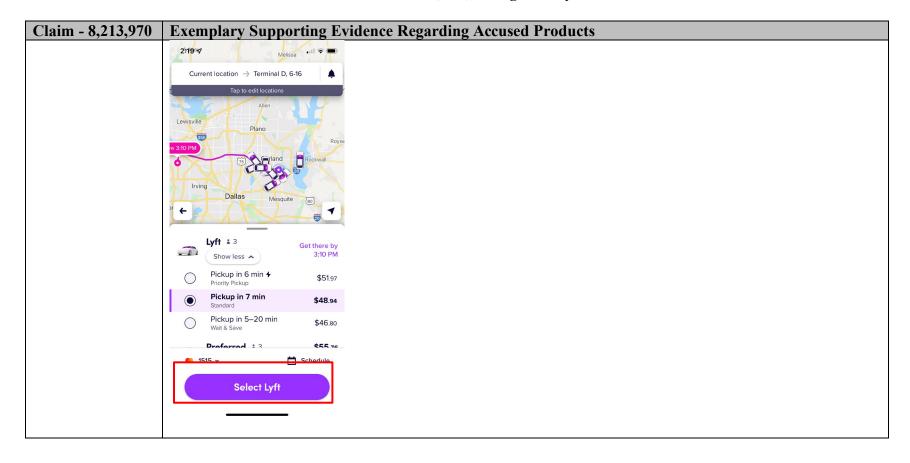


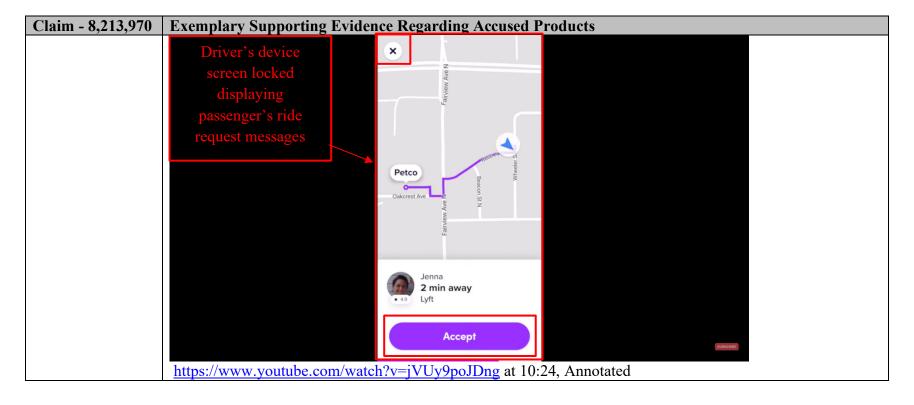


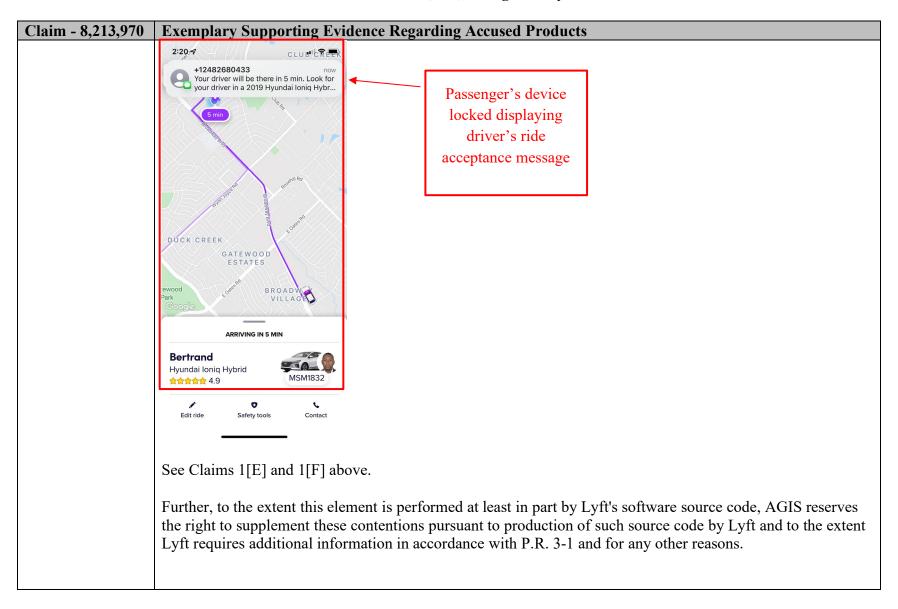


Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
triggers the forced	
message alert	
software	
application	For example, at the backend, each nearby driver's Lyft app that received a ride request sends an
program to take	acknowledgement of receipt to Lyft's servers and further to the passenger's Lyft app.
control of the	
recipient PDA/cell	For example, the ride request takes control of the Lyft driver's device, displays a message with at least a
phone and show	pickup location and list of responses including but not limited to accept or decline (cross button). Further, the
the content of the	Lyft driver app plays an alert until a response is selected.
text message and a	
required response	Walmart Supercenter Walmart Supercenter
list on the display	
recipient PDA/cell	
phone or to repeat	Drop-off Expelled Edit Standillo
audibly the content	Petco Animal Supplies
of the voice	Oakerne free
message on the	6 Pickup Radisson Hotel Mi Edit
speakers of the	
recipient PDA/cell	County Road B2 W 48
phone and show	Total Wine & More County Ro®
the required	
response list on	ECONOMY LUXURY EXTRA
the display	Lyft \$7.10
recipient PDA/cell	Good deal 4:13 PM
phone; and	Lyft XL \$8.75
	4:14 PM
	PayPal Schedule
	Request Lyft
	https://www.youtube.com/watch?v=j0RDMLcmOgU at 4:01

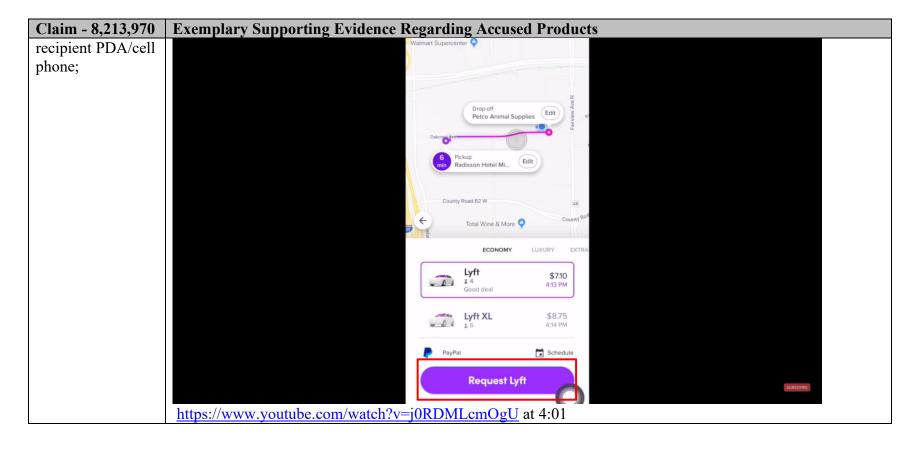


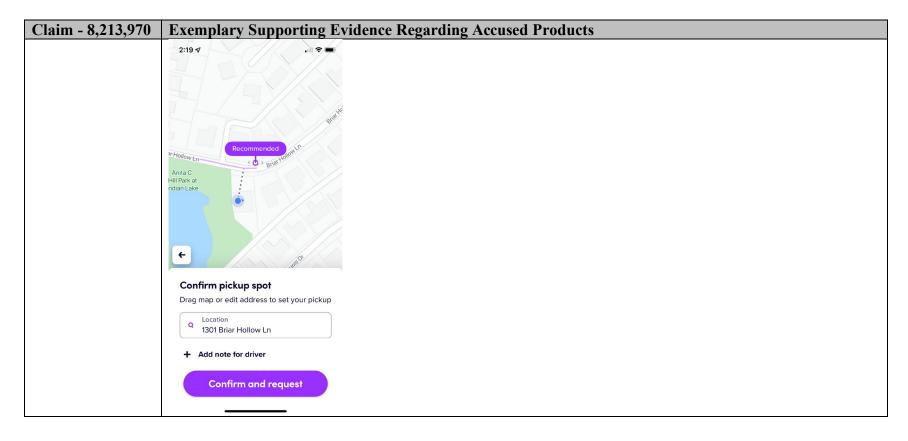


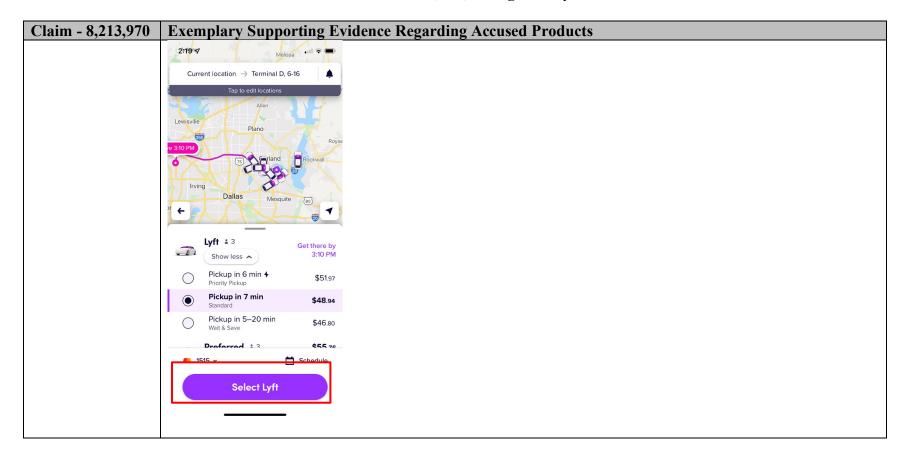


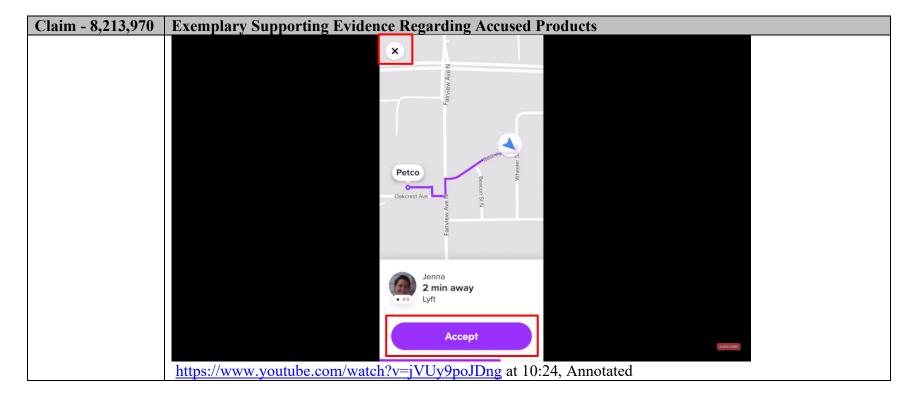


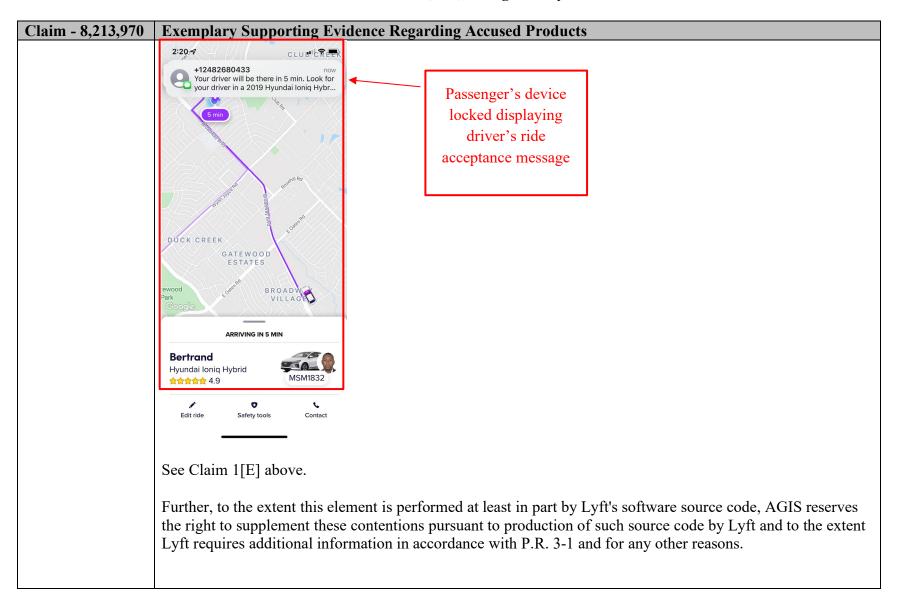
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
10[C] transmitting	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
a selected required	and/or contributing to the performance of: transmitting a selected required response from the response list in
response from the	order to allow the message required response list to be cleared from the recipient's cell phone display, whether
response list in	said selected response is a chosen option from the response list, causing the forced message alert software to
order to allow the	release control of the recipient PDA/cell phone and stop showing the content of the text message and a
message required	response list on the display recipient PDA/cell phone and or stop repeating the content of the voice message on
response list to be	the speakers of the recipient PDA/cell phone.
cleared from the	
recipient's cell	
phone display,	
whether said	For example, the Lyft driver app requires selecting to accept or dismiss a ride request to release control of the
selected response	driver's device (clear the locked display showing ride request message). Selecting a response also stops the
is a chosen option	alerts in driver's device.
from the response	
list, causing the	
forced message	
alert software to	
release control of	
the recipient	
PDA/cell phone	
and stop showing	
the content of the	
text message and a	
response list on	
the display	
recipient PDA/cell	
phone and or stop	
repeating the	
content of the	
voice message on	
the speakers of the	





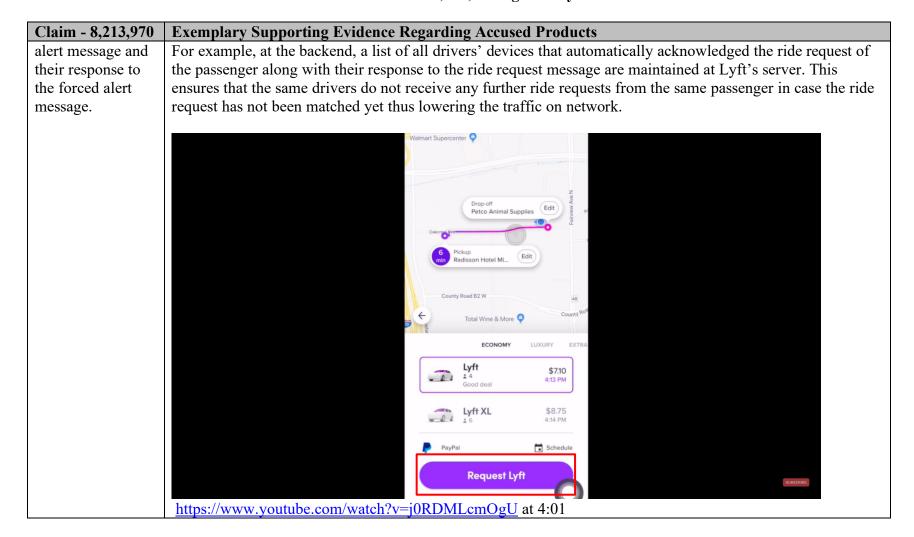


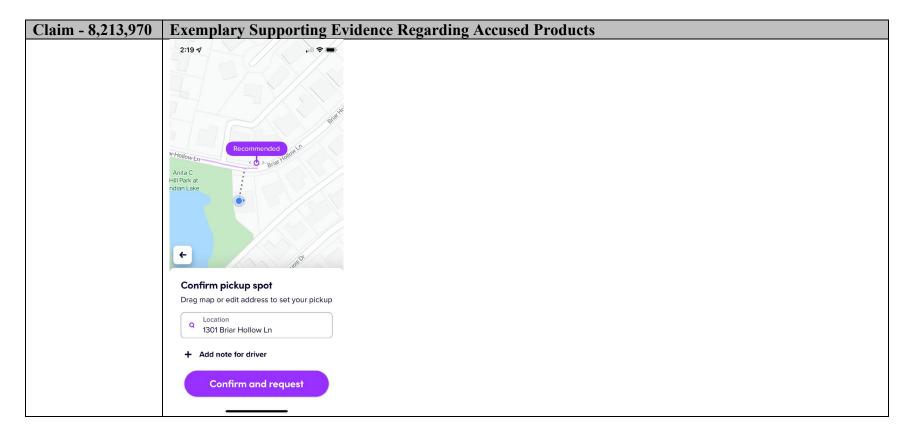


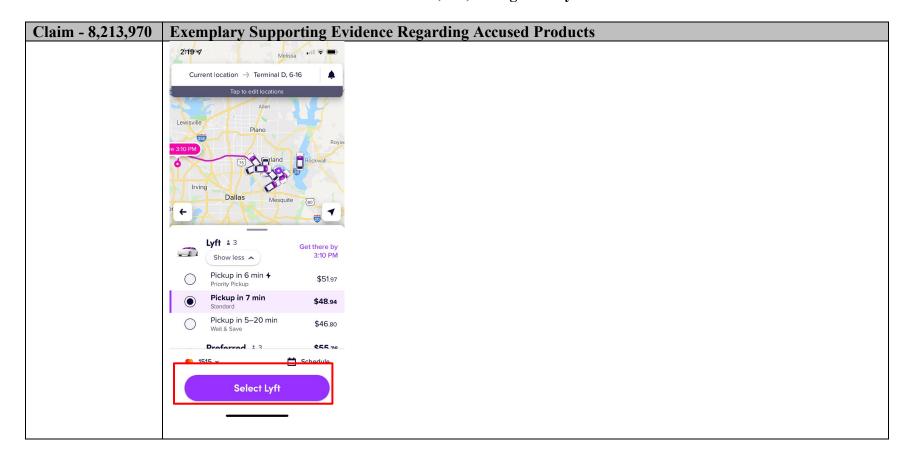


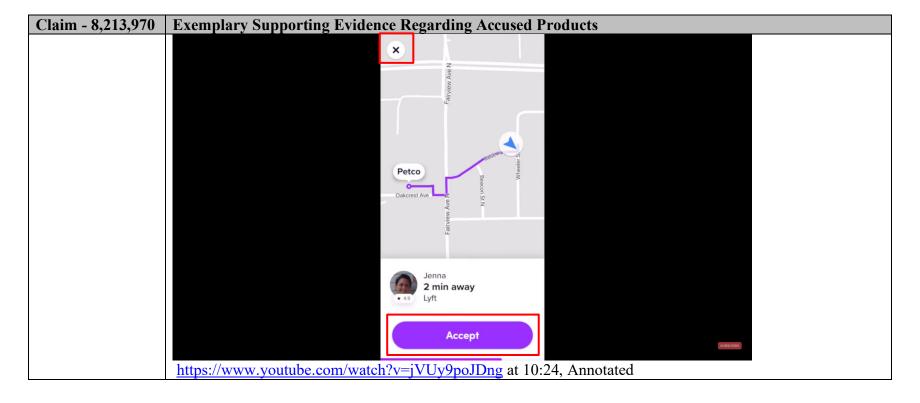
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
10[D] displaying	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform,
the response	and/or contributing to the performance of: displaying the response received from the PDA cell phone that
received from the	transmitted the response on the sender of the forced alert PDA/cell phone.
PDA cell phone	
that transmitted	
the response on	
the sender of the	For example, the Lyft app displays a driver's response of accepting the request for a ride on the passenger's
forced alert	device. For example, the screenshot below shows Joe (driver) who accepted a passenger's request for a ride.
PDA/cell phone;	
and	□ LYFT now
	Lyft Your ride is arriving in 2 min. Be ready outside and
	look for Joe in the black Kia Optima
	23
	Pickup Radisson Hotel Minnea Edit
	Onlores to Drop-off Petco Animal Suppl
	REI •
	REI 🗸
	County Road B2 W County Road B2 W
	Total Wine & More V
	ARRIVES IN 2 MIN
	loe
	Kia Optima 123-XYZ
	Edit ride Send ETA Con
	https://www.youtube.com/watch?v=j0RDMLcmOgU, at 5:05

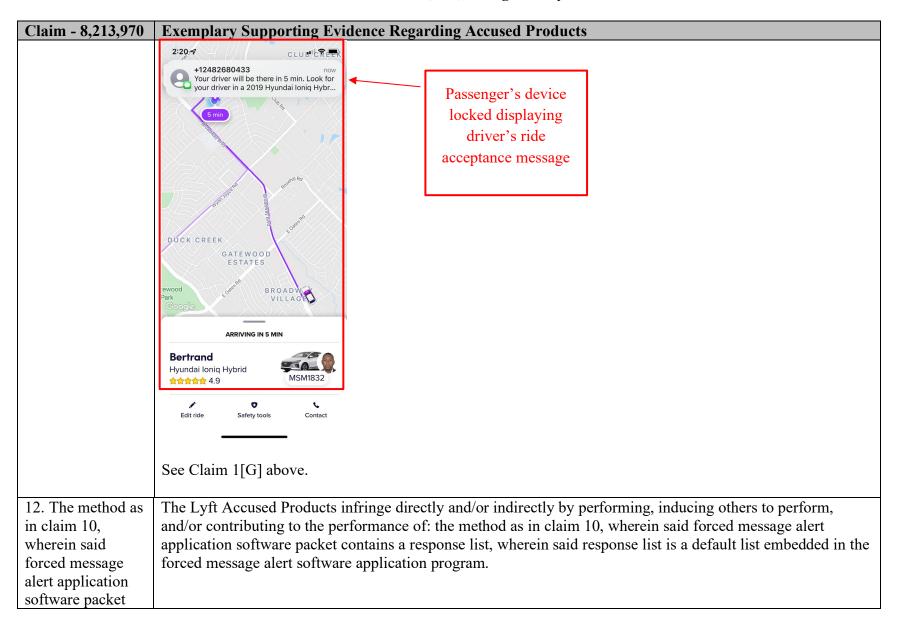
Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
	# 12482680435 bether in 5 min. Look for your draw will be there in 5 min. Look for your draw a 2010 Hyundai lonia Hybr. BOADWOOD ESTATES WOOD ESTATES WOOD BETTONG HyUNDAI IN 5 MIN Bertrand Hyundai lonia Hybrid ####################################
10[E] providing a list of the recipient PDA/cell phones have automatically acknowledged receipt of a forced	The Lyft Accused Products infringe directly and/or indirectly by performing, inducing others to perform, and/or contributing to the performance of: providing a list of the recipient PDA/cell phones have automatically acknowledged receipt of a forced alert message and their response to the forced alert message.

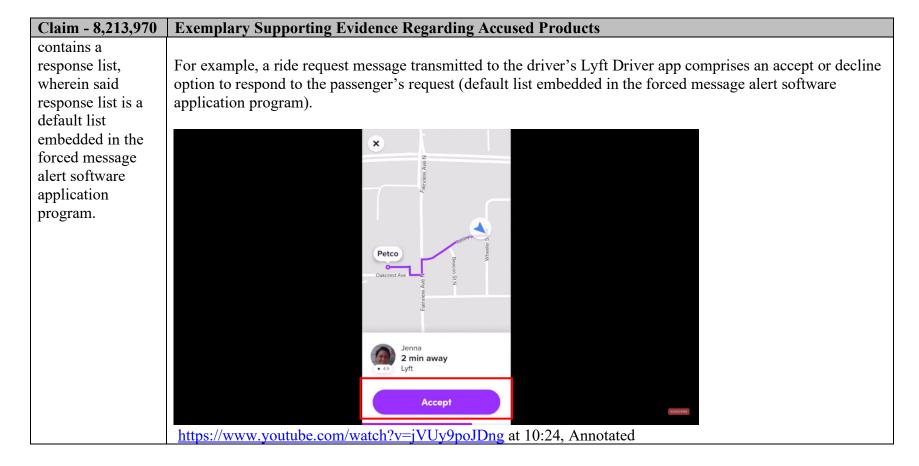


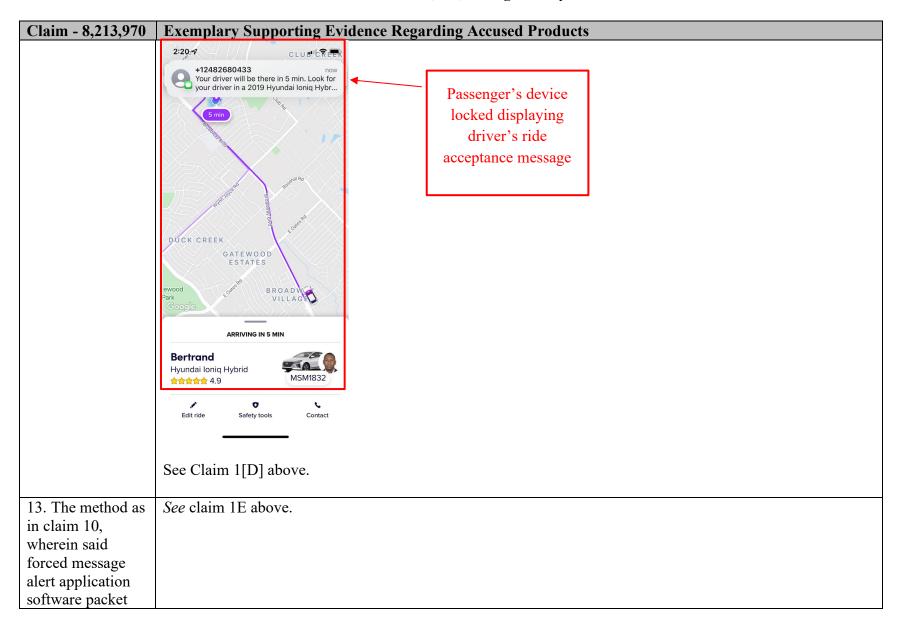












Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1035 of 1092

RESTRICTED CONFIDENTIAL SOURCE CODE

Claim - 8,213,970	Exemplary Supporting Evidence Regarding Accused Products
contains a	
response list,	
wherein said	
response list is a	
custom response	
list that is created	
at the time the	
specific forced	
message alert is	
created on the	
sender PDA/cell	
phone.	

Attachment E for US Patent No. 7,031,728 Against Lyft Accused Products

Based on information presently available,¹ Defendant AGIS Software Development LLC ("AGIS Software") contends that Defendant Lyft Inc. ("Lyft" or "Plaintiff") infringes claim 7 (the "Asserted Claim") of U.S. Patent No. 7,031,728 (the "'728 Patent") through the Accused Products, Services which are manufactured, sold, offered for sale, and/or used by Lyft.

The Accused Products comprise the Lyft and Lyft Driver applications, servers, and services manufactured, used, or sold by Lyft, Inc. during and after 2016. AGIS Software reserves the right to seek leave of court to amend this list of Accused Products after the filing of an amended complaint or as discovery progresses.

Lyft directly infringes each of the Asserted Claims by making, using, importing, testing, distributing, selling, and/or offering for sale the Accused Products in violation of 35 U.S.C. § 271(a).

Lyft indirectly infringes the Asserted Claims in violation of 35 U.S.C. § 271(b) by inducing third parties, including its users and/or customers, to directly infringe through their operation and use of the Accused Products. Lyft has knowingly and intentionally induced this direct infringement by, *inter alia*, (i) selling, importing, or otherwise providing the Accused Products to third parties with the intent that the Accused Products will be operated and used in a manner that practices the Asserted Claims; and (ii) marketing and advertising the Accused Products. Lyft's marketing and promotional materials for the Accused Products are found, for example, on Lyft's website, and in App stores of operating systems for which the Accused Products are made available. For example, Lyft's website offers customers instructions and/or manuals for the Accused Products that instruct customers to, among other things, use the accused services in the Accused Products. Lyft's website also offers support to customers, including instruction to, among other things, use the Accused Products share location information with a group of users. Lyft knows, or should have known, that its actions will result in infringement of the Asserted Claims, or subjectively believes that there is a high probability that its actions will result in infringement of the Asserted Claims but has taken deliberate actions to avoid learning these facts.

Lyft also contributorily infringes each of the Asserted Claims in violation of 35 U.S.C. § 271(c) by selling, importing, offering for sale, and otherwise providing the Accused Products, which when used directly infringe the Asserted Claims. The Accused Products constitute a material part of the Asserted Claims.

D-1

¹ There is no operative complaint asserting non-infringement of any patent claim in this action at this time. AGIS Software reserves the right to update its contentions upon receipt of any future amended complaint.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1037 of 1092

Attachment E for US Patent No. 7,031,728 Against Lyft Accused Products

The following chart identifies specifically where each limitation of each Asserted Claim is found within the Accused Products, and in particular, the corresponding elements that meet the limitations in the Lyft and Lyft Driver applications, services, and services. On information and belief, each charted version of the Lyft Rider and Driver Apps are representative of all versions of the Accused Products, including all variants of the Accused Products made, sold, offered for sale, or used on any version of the Android and iOS operating systems.

AGIS Software does not concede that any claims of the '728 Patent that are not listed below are not infringed by the identified Accused Products. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose AGIS from citing or relying on additional documents, information, source code, and/or testimony at a later time. These contentions are preliminary in nature and an analysis of Lyft's products, internal documentation, source code, and/or testimony from relevant witnesses may more fully and accurately describe the infringing features of its accused products. Accordingly, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions once such additional information is made available to AGIS Software. Furthermore, AGIS Software reserves the right to seek leave of court to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Lyft, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

The contents of each claim cell below on which another claim cell depends are expressly incorporated by reference in that dependent cell, as if set forth in their entirety therein.

² The construction of claim terms herein is consistent with the constructions in *AGIS Software Dev. LLC v. Huawei Device USA, Inc.*, No. 2:17-cv-00513-JRG, Dkt. 205 (E.D. Tex. Oct. 10, 2018); *AGIS Software Dev. LLC v. Google LLC*, No. 2:19-cv-00361-JRG, Dkt. 147 (E.D. Tex. Dec. 8, 2020); *AGIS Software Dev. LLC v. T-Mobile USA, Inc., et al.*, No. 2:21-cv-00072-JRG, Dkt. 213 (E.D. Tex. Nov. 10, 2021). AGIS Software reserves the right to update its constructions and contentions in view of this Court's claim construction order.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1038 of 1092

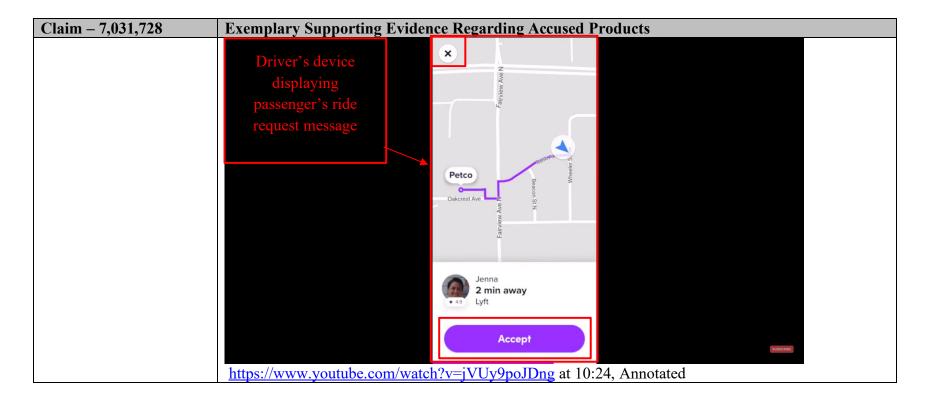
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
7[P]. A method of	The Lyft Accused Products practice the method of establishing a cellular phone communication
establishing a cellular	network for designated participants, each having a similarly equipped cellular phone that includes voice
phone communication	communication, free and operator selected text messages, photograph and video, a CPU, a GPS
network for designated	navigation system and a touch screen display.
participants, each having	
a similarly equipped	
cellular phone that	
includes voice communication, free and operator selected text messages, photograph and video, a CPU, a GPS navigation system and a touch screen display comprising the steps of:	For example, Lyft provides Lyft app for passengers and Lyft Driver app for drivers. The Lyft apps for riders and drivers, in conjunction with Lyft's servers and services, provide users with interactive methods to request, view, and track locations of passengers/riders using real-time maps and communications. The Lyft server(s) and their services communicate with the Lyft apps for riders and drivers. The Lyft server(s) and their services host information related to and instructions for processing user/device/vehicle accounts, location data, and map data. The claimed methods are distributed by Lyft in the Lyft apps. The claimed methods are used/tested by Lyft using the Lyft apps. The claimed methods are downloaded and installed by Lyft's customers (riders) and personnel (drivers, personnel) at the direction/encouragement of Lyft and used by Lyft's customers and Lyft's personnel. For example, when the passenger requests a ride from the Lyft app installed on their mobile phone, the ride request message is broadcasted to the nearby drivers who are online on the Lyft driver app. The message comprises the passenger's name and profile photo. For example, when the driver accepts the ride request of the passenger, the passenger's mobile phone receives the driver's information such as name, location, and driver's photo. After the passenger and the driver match, both of them get the option to text each other.

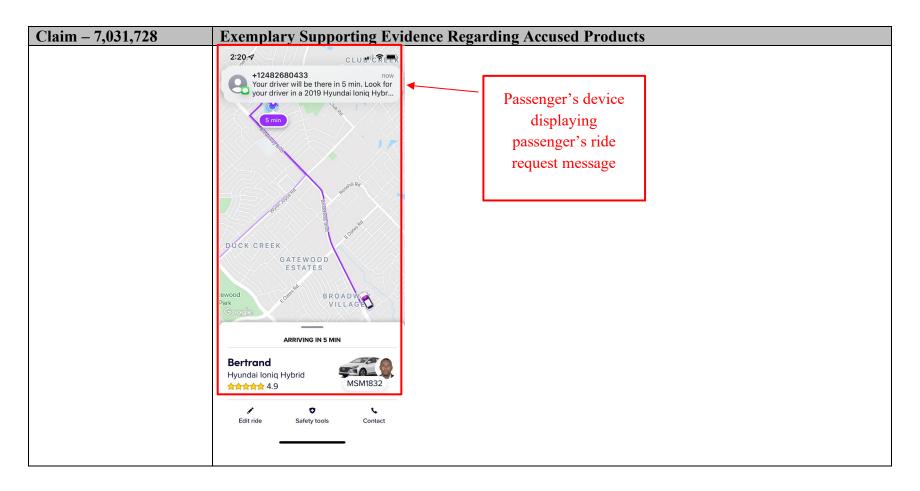
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1040 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Salish of cot + ind Arts free free 100 100 100 100 100 100 100
	Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests. https://www.lyft.com/hub/posts/how-to-give-a-ride

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1041 of 1092

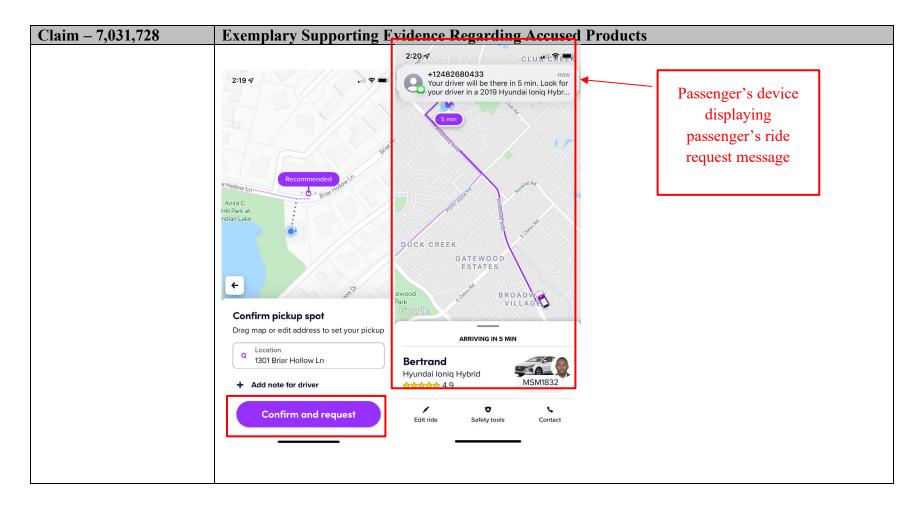




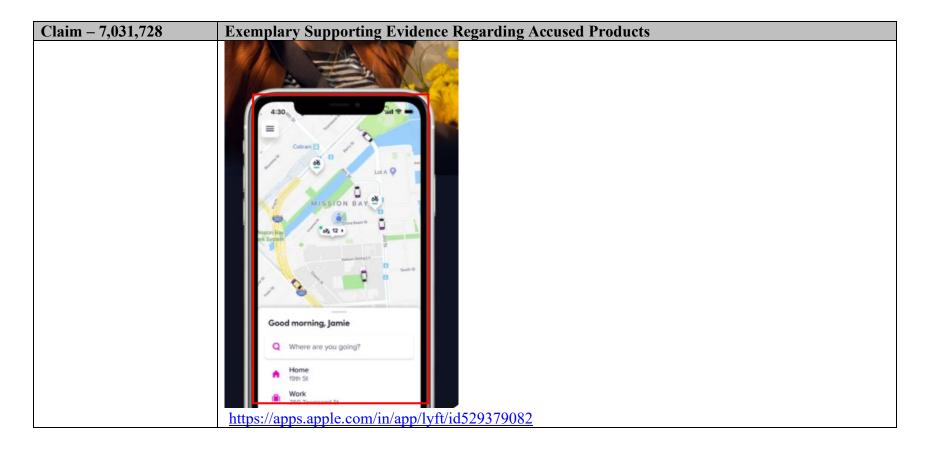
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1043 of 1092



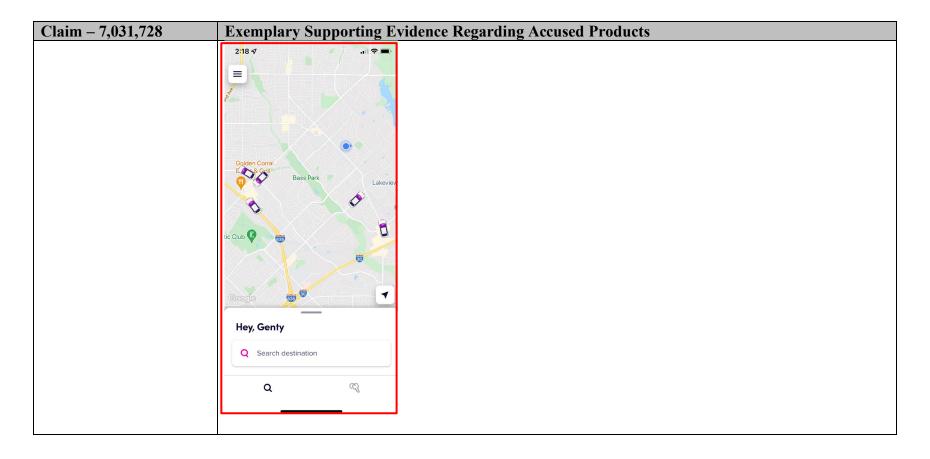
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1044 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1045 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1046 of 1092



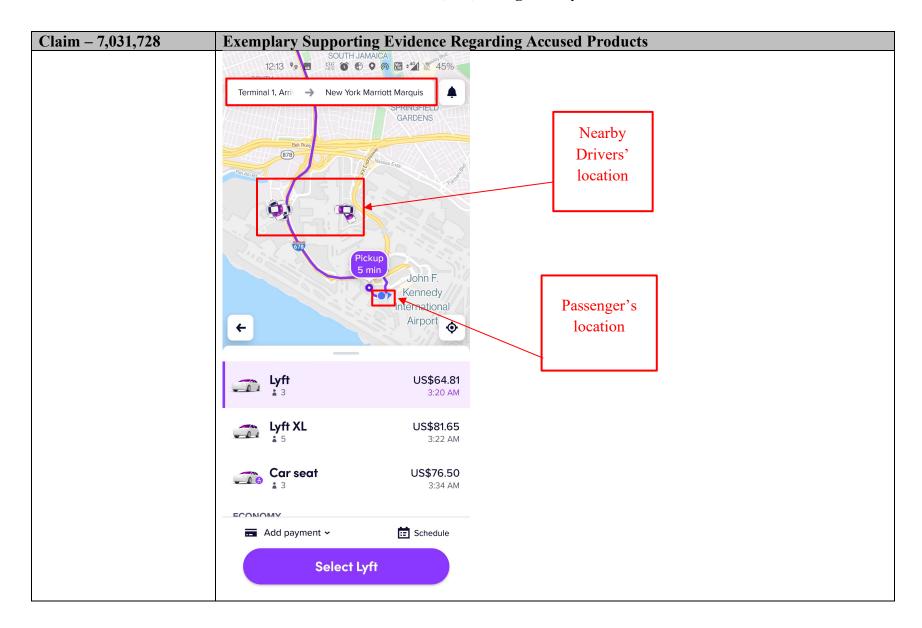
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1047 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Combining multiple components into a single chip saves on space, cost, and power consumption.
	Essentially, an SoC is the brain of your smartphone that handles everything from the Android operating
	system to detecting when you press the power off button. SoCs connect to other components too,
	such as cameras, a display, RAM, flash storage, and much more.
	The list below contains the most common components that you will find inside a smartphone System-on-a-Chip. We're going to cover a few of the most important ones later on in this article.
	· Central Processing Unit (CPU) — The "brains" of the SoC. Runs most of the code for the Android OS and most of your apps.
	• Graphics Processing Unit (GPU) — Handles graphics-related tasks, such as visualizing an app's user interface and 2D/3D gaming.
	 Image Processing Unit (ISP) — Converts data from the phone's camera into image and video files.
	 Digital Signal Processor (DSP) — Handles more mathematically intensive functions than a CPU. Includes decompressing music files and analyzing gyroscope sensor data.
	· Neural Processing Unit (NPU) — Used in high-end smartphones to accelerate machine
	learning (AI) tasks. These include voice recognition and camera processing.
	· Video encoder/decoder — Handles the power-efficient conversion of video files and
	formats.
	· Modems — Converts wireless signals into data your phone understands. Components
	include 4G LTE, 5G, WiFi, and Bluetooth modems.
	https://www.androidauthority.com/what-is-an-soc-smartphone-chipsets-explained-1051600/

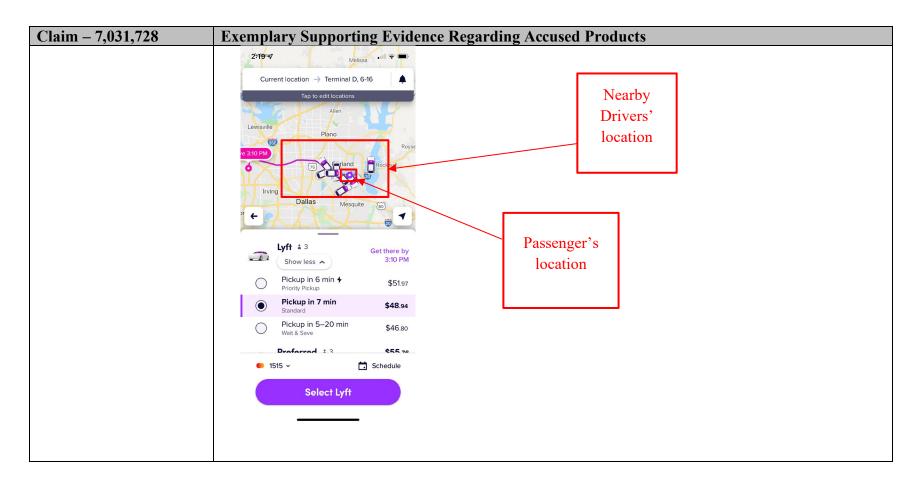
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1048 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	You must have seen that every Android and iOS device in today's age comes with
	GPS right inside it. This is one feature that will be there in every smartphone no
	matter what the price of that device might be. And that is because of the fact that
	GPS is the most basic yet most useful feature on every smartphone.
	Just for information, the GPS stands for Global Positioning System and it provides
	accurate geolocation and time information for every equipment that is equipped
	with a GPS receiver. Now, the best example of using GPS is with services such as
	Google Maps, Apple Maps, and others where you can see where exactly you are right
	now on the Map. This is thanks to the GPS receiver which sends a signal to the GPS
	satellite.
	https://www.cashify.in/how-to-turn-off-gps-on-any-android-or-ios-device

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1049 of 1092

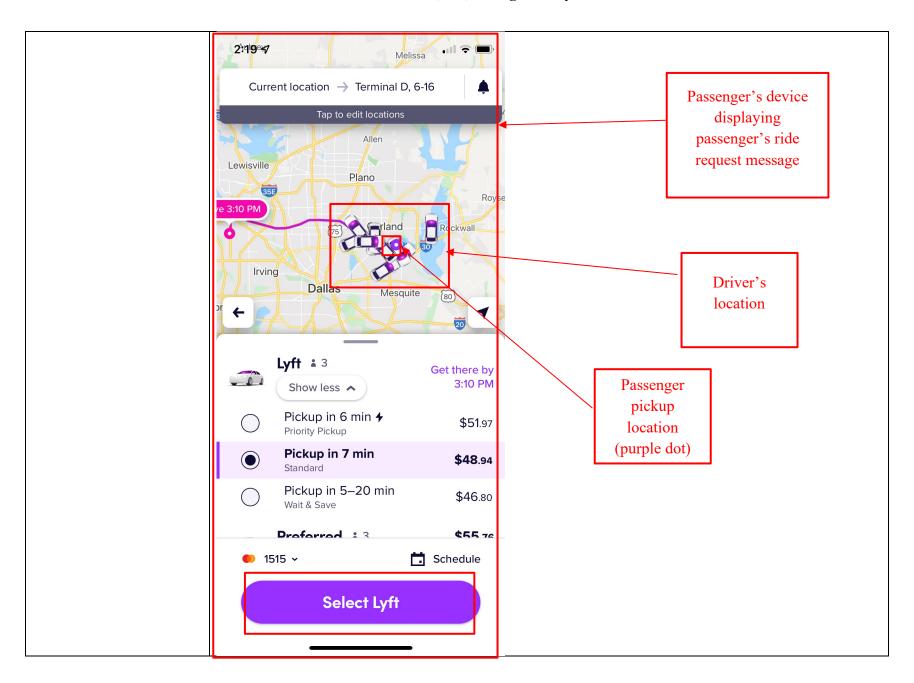


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1050 of 1092

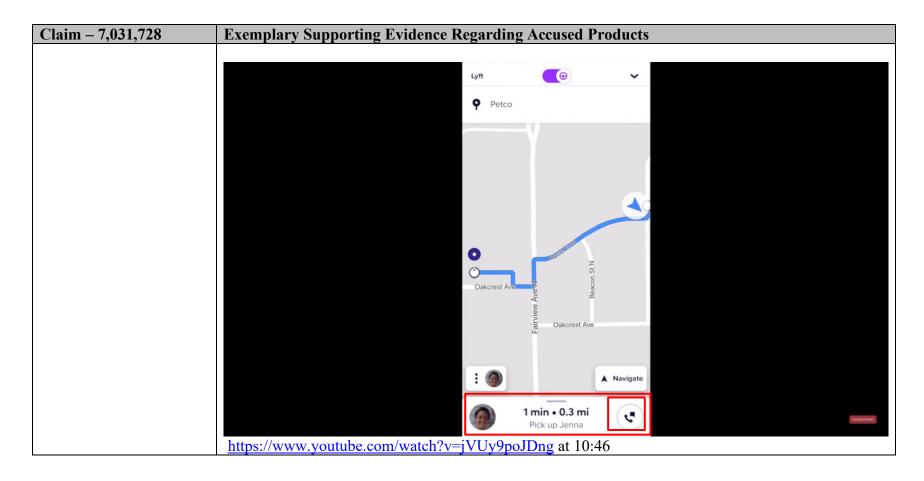


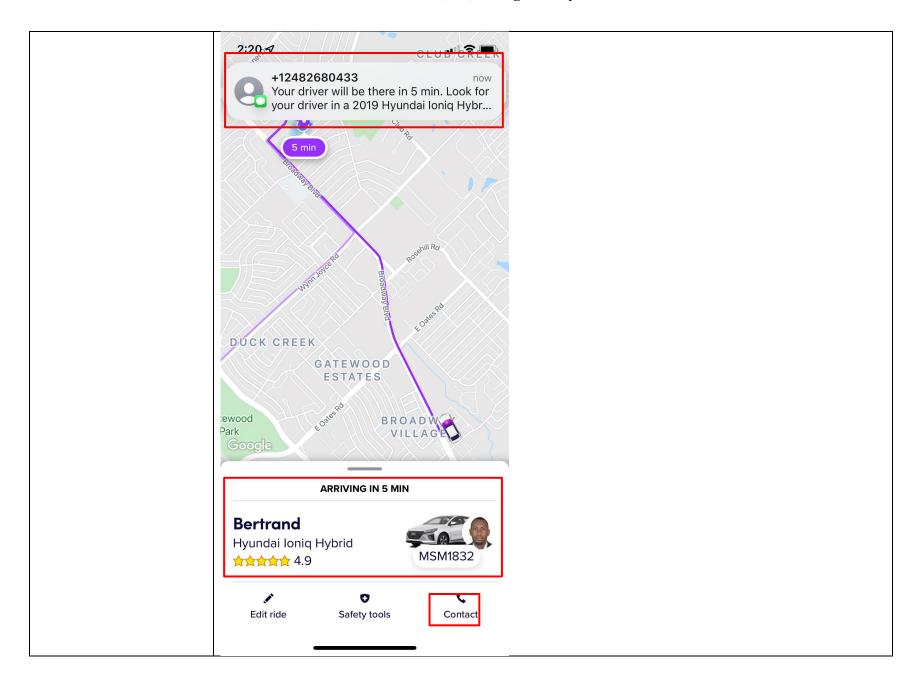
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1051 of 1092



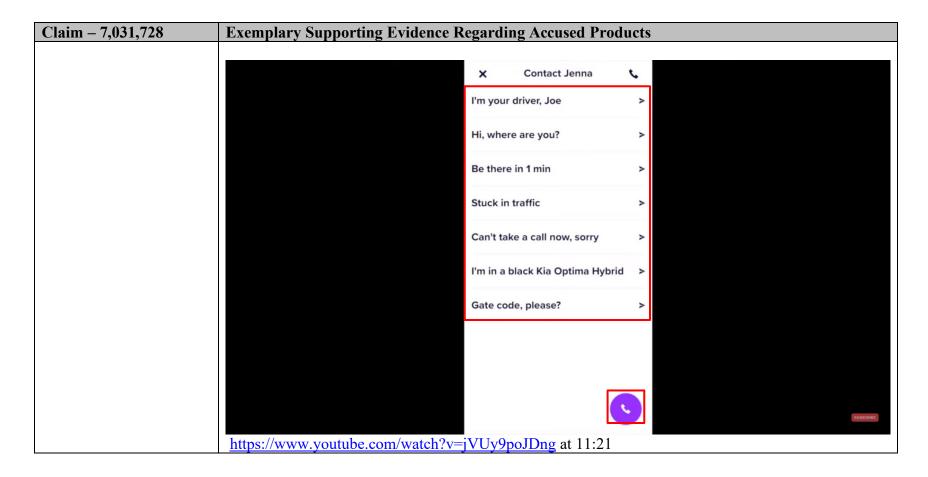


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1053 of 1092

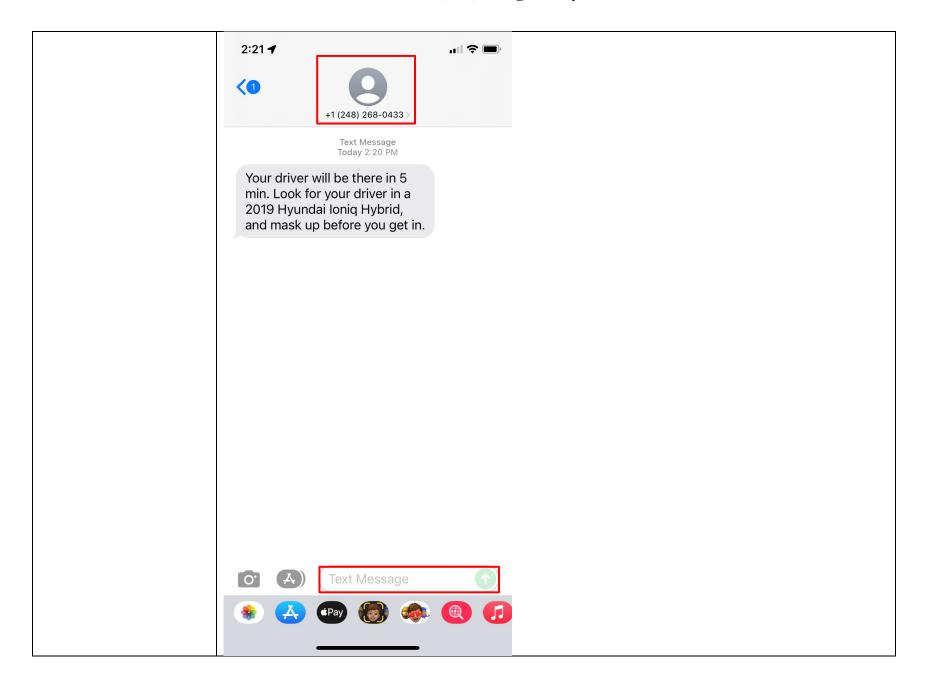


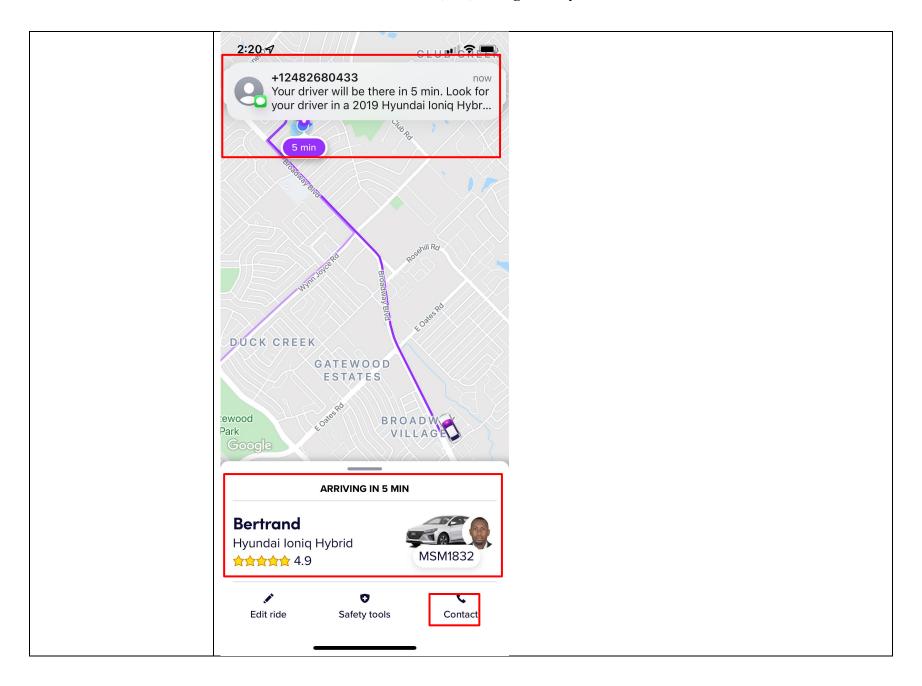


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1055 of 1092

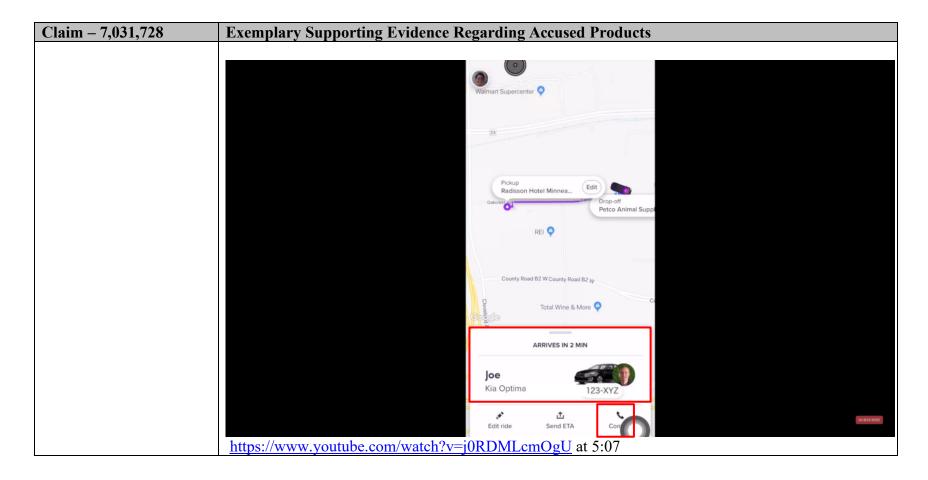


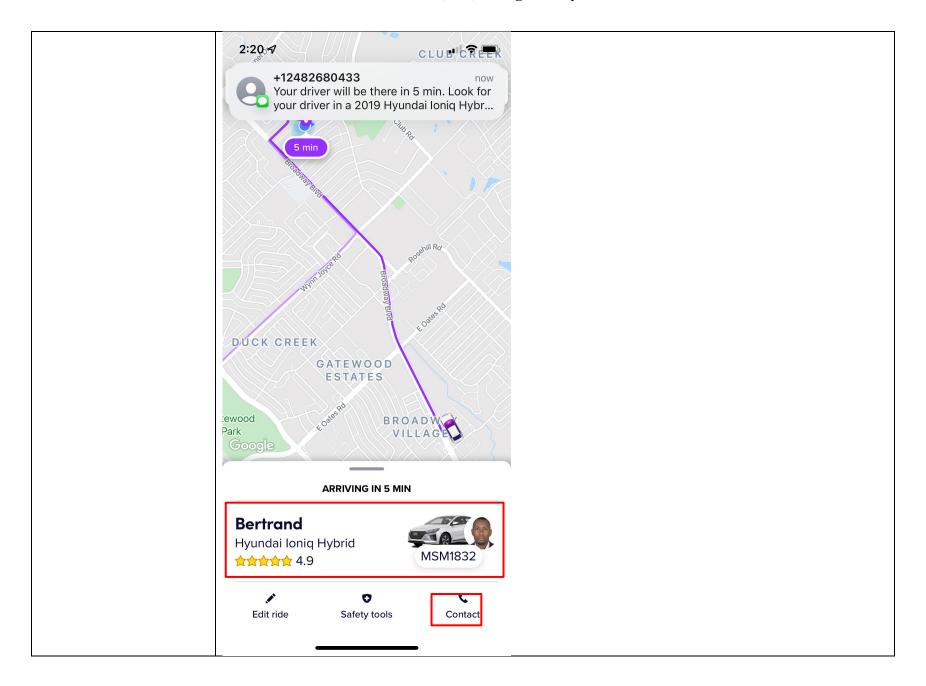
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1056 of 1092



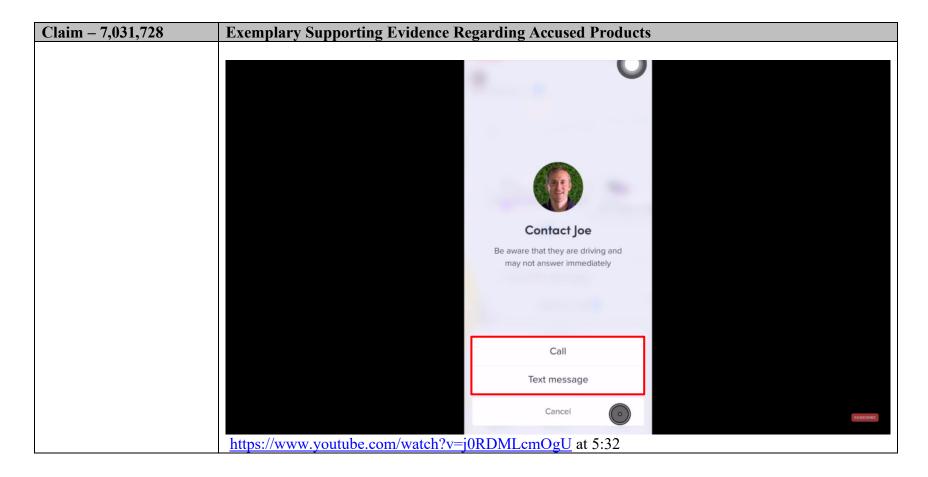


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1058 of 1092

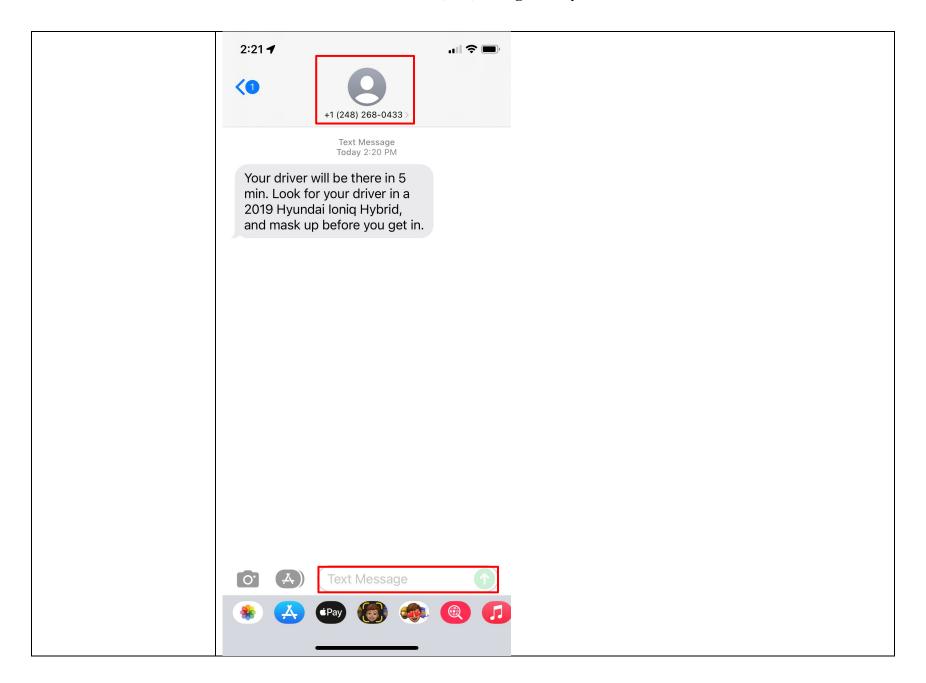


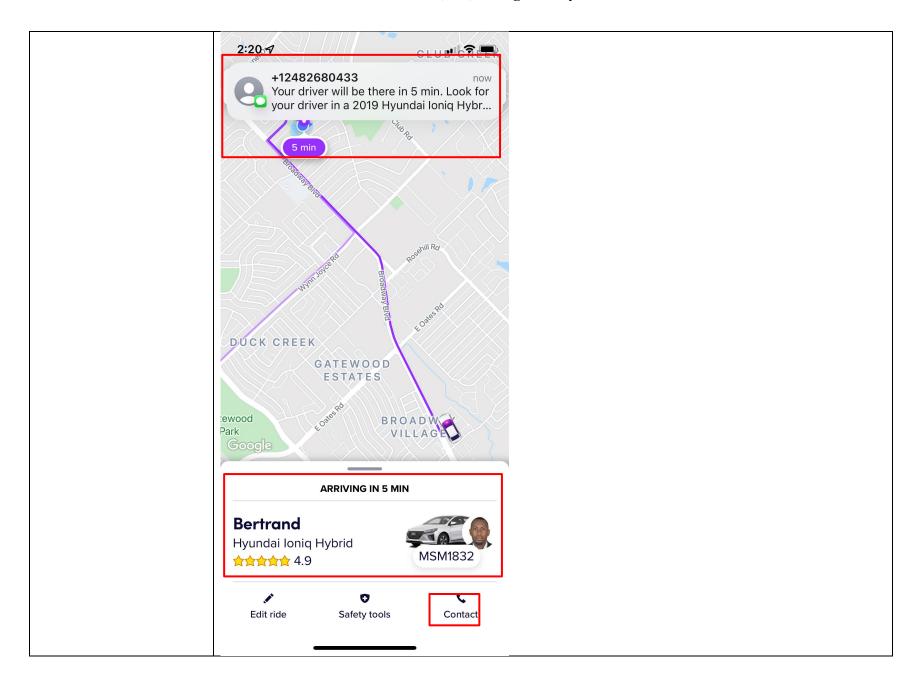


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1060 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1061 of 1092

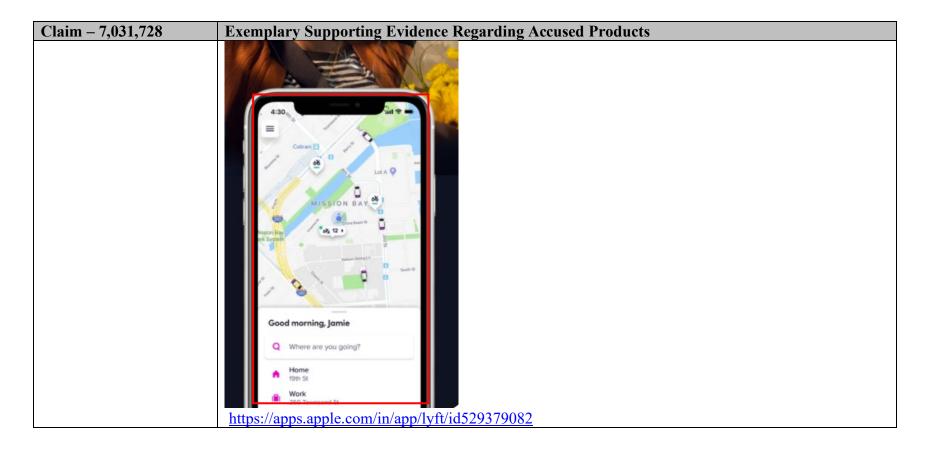




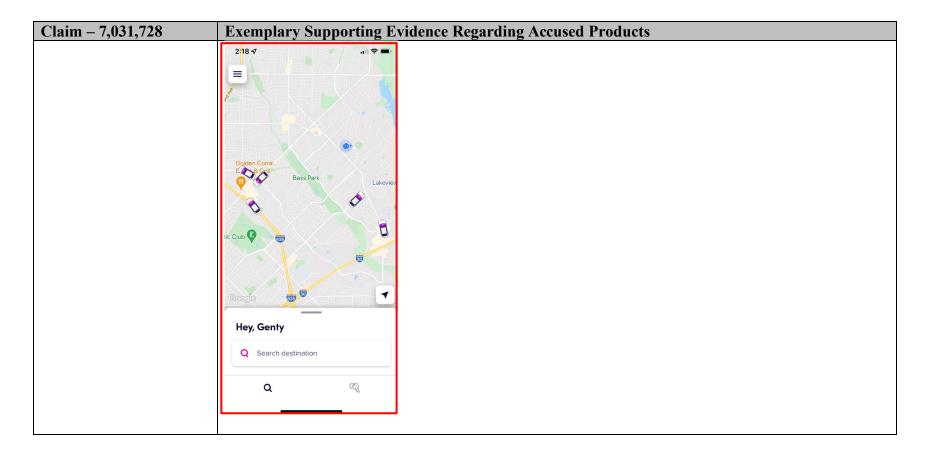
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[A] a) generating one or more symbols on the touch display screen, each representing a different participant that has a	See Claim 7P above. The Lyft Accused Products practice generating one or more symbols on the touch display screen, each representing a different participant that has a cellular phone that includes said voice communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen display.
cellular phone that includes said voice	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
communication, free and operator selected text messages, photograph and video, a CPU, said GPS system and a touch screen	For example, drivers' and passengers' mobile phones with the Lyft Driver and the Lyft app installed generates symbols including but not limited to blue dot denoting passenger's location, blue navigate icon denoting driver's location, and vehicle icons denoting nearby driver's location on the display of the mobile phones.
display;	Lyft Driver app
	We've separated the passenger and driver experiences into two separate mobile apps — one exclusively for passengers (named the Lyft app) and the other exclusively for drivers (named the Lyft Driver app).
	The Lyft Driver app will eventually be standard for all drivers and required for driving. At this time, drivers can keep using the Lyft app to give rides. Don't worry! While we have some planned improvements to the Lyft Driver app, we've kept its features the same.
	https://help.lyft.com/hc/en-ca/articles/115013079208-Lyft-Driver-app

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	What is Lyft?
	Lyft is a platform that connects drivers with individuals and organizations that need rides.
	https://www.lyft.com/drive-with-lyft
	Go online Open your Lyft Driver app and tap the steering wheel icon. Lyft will now find the closest passenger to your location requesting a ride. Turn on some music and get comfortable: that first ride request may come quickly or may take a while, depending on the number of current passenger requests.
	https://www.lyft.com/hub/posts/how-to-give-a-ride

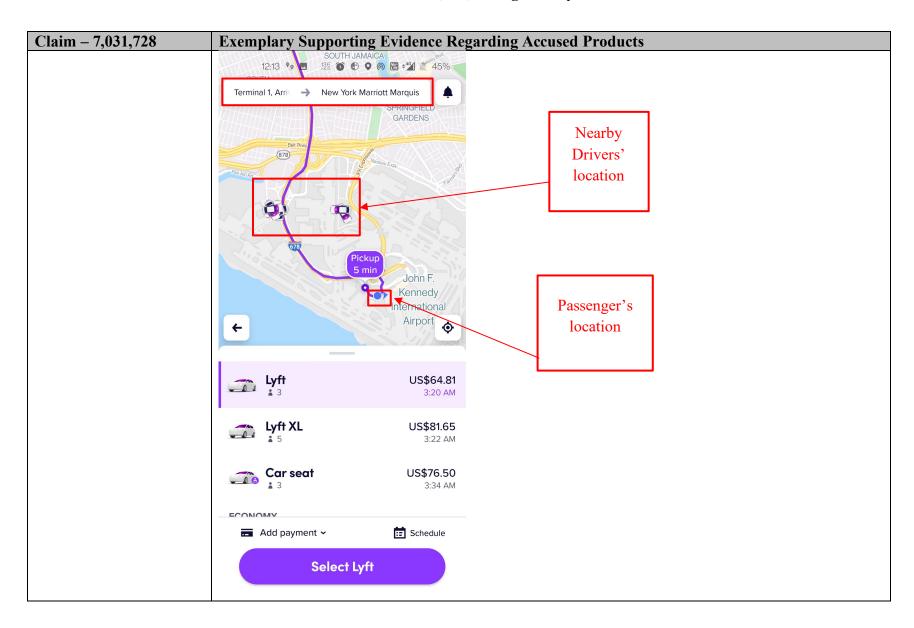
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1065 of 1092



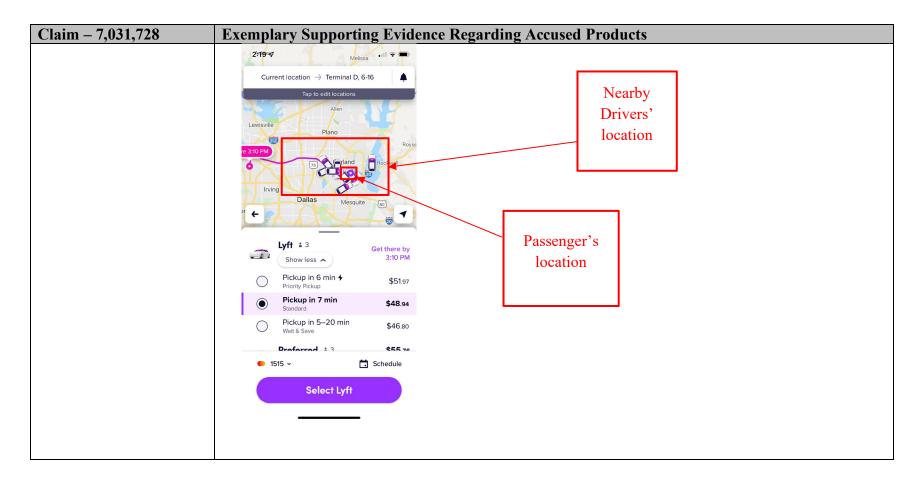
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1066 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1067 of 1092

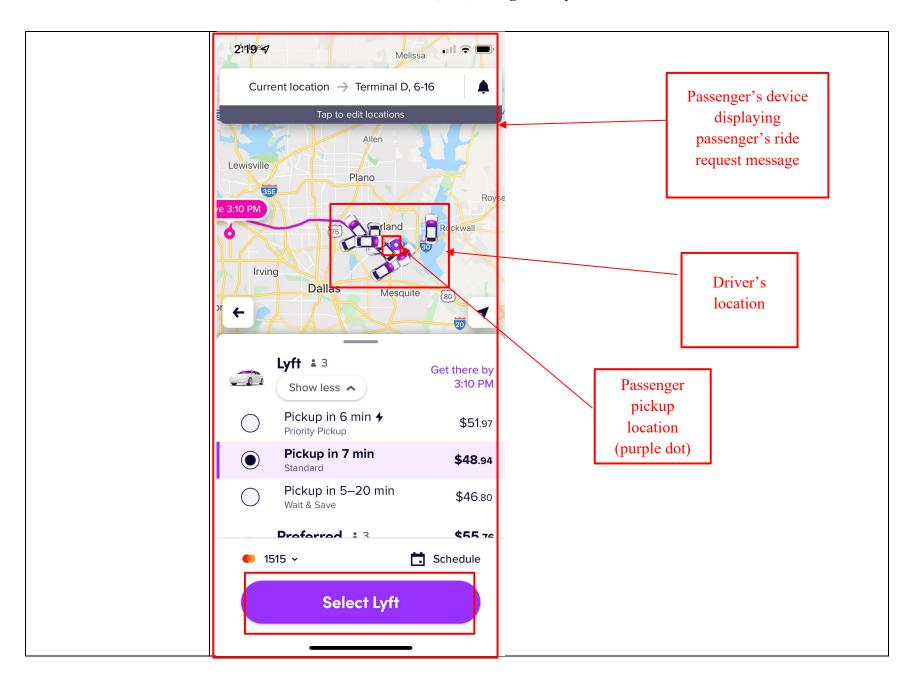


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1068 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1069 of 1092



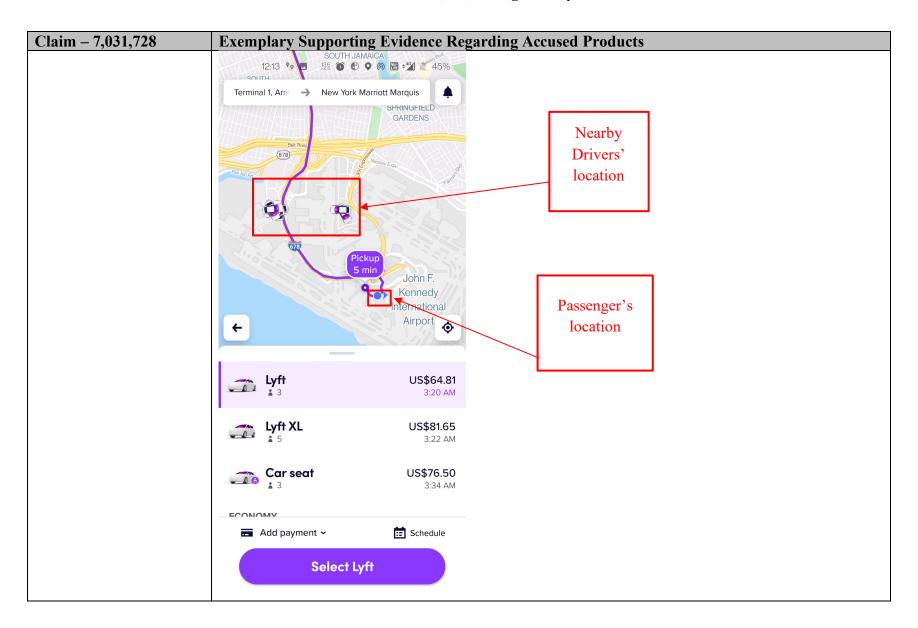


Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
7[B]. b) providing and storing in each of the participant cellular phones one or more	The Lyft Accused Products practice providing and storing in each of the participant cellular phones one or more cellular phone telephone numbers, each cellular phone number of which relates to a different symbol of each of the participants in the communication network.
cellular phone telephone numbers, each cellular	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
phone number of which relates to a different symbol of each of the participants in the communication network;	For example, Lyft designates virtual numbers for each rider and driver when they join the Lyft network and initiate communications with each other. Lyft stores and provides the virtual phone numbers in the Lyft apps and/or the Lyft server(s). Respective phone numbers for each driver/rider is associated with the corresponding rider/driver and their symbols.
communication network,	How to start an application
	Create a Lyft account through the app or on the web at lyft.com/drivers.
	Enter your name, phone number, and email address, then submit all the info we need to ensure you meet the requirements. If you sign out of your account, any application info you've submitted will be saved.
	If you have a promo code , enter it when creating an account. If you apply through a link on a website, the code will be added automatically.
	Back to top https://help.lyft.com/hc/e/articles/115013081188

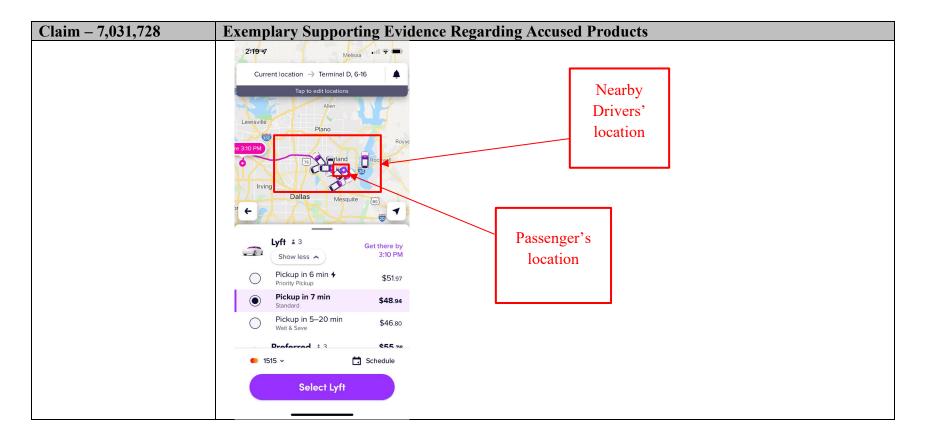
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1072 of 1092

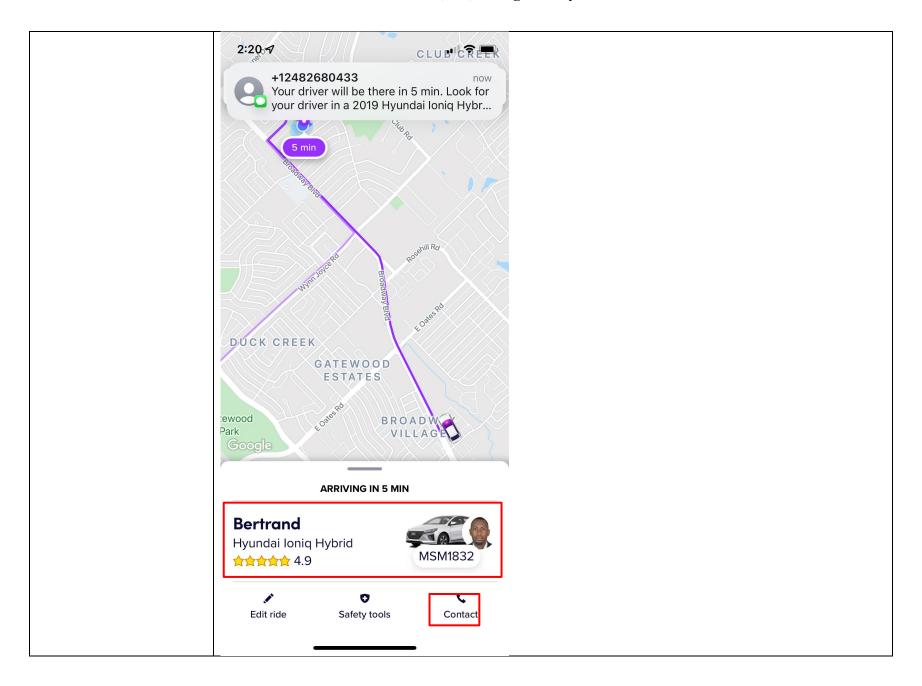
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Before you begin, be sure you have the following:
	Your phone numberYour email addressA photo of yourself
	Get started
	1. Type in your device's phone number
	2. To verify your identity, we'll send a verification code via text to your phone number. We want to make sure you're human!
	3. The text message should arrive immediately. If you don't see it after a bit, tap 'Resend code.'
	4. Type in your name, email address, and take a selfie so your driver knows who to pick up
	5. That's it! Once you've set up your account, you'll be able to request a ride (Learn How to request a ride).
	https://help.lyft.com/hc/e/articles/115012926947-How-to-create-a-Lyft-account

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1073 of 1092

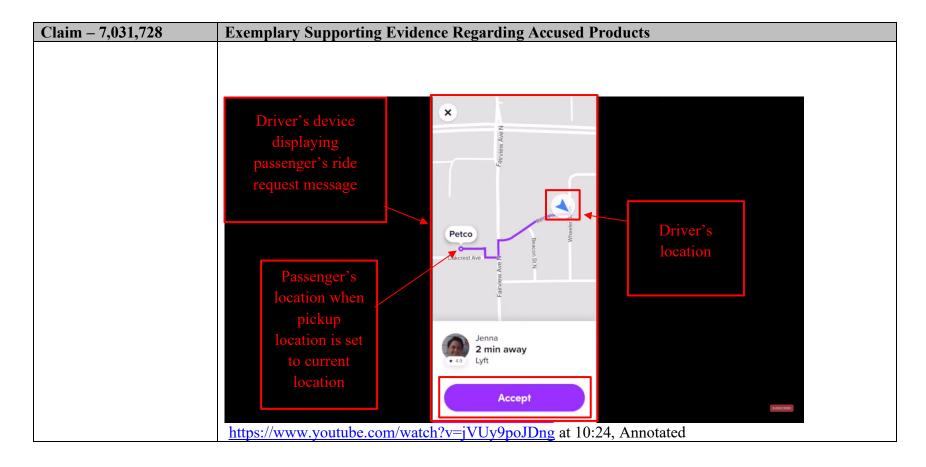


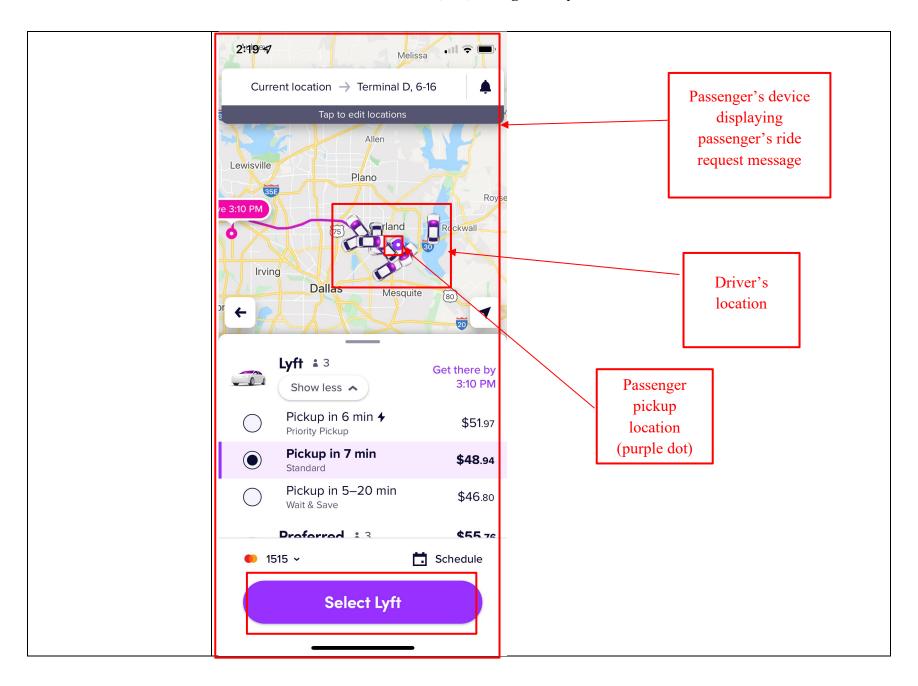
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1074 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1076 of 1092



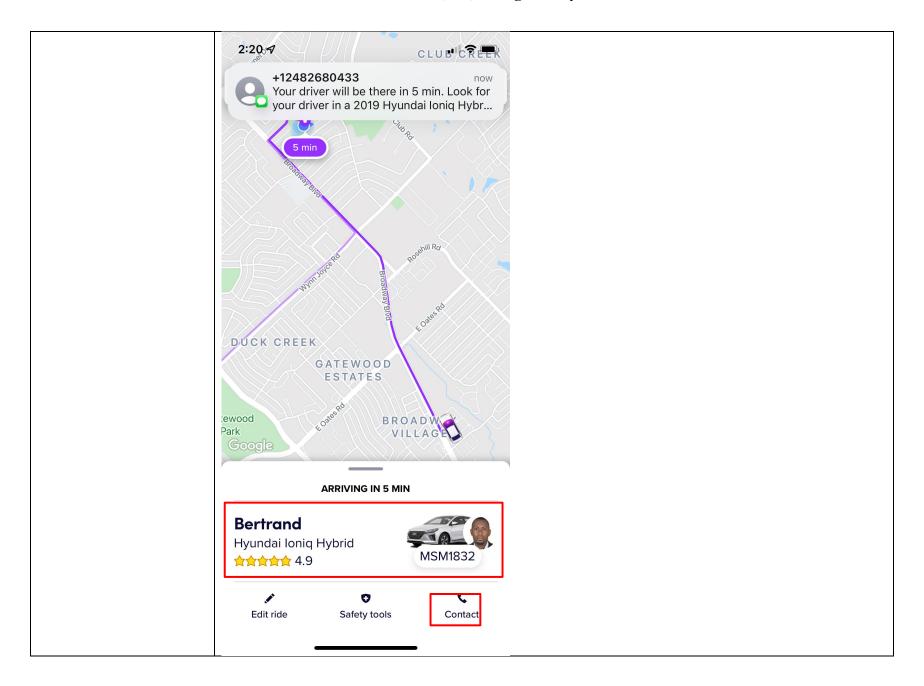


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1078 of 1092

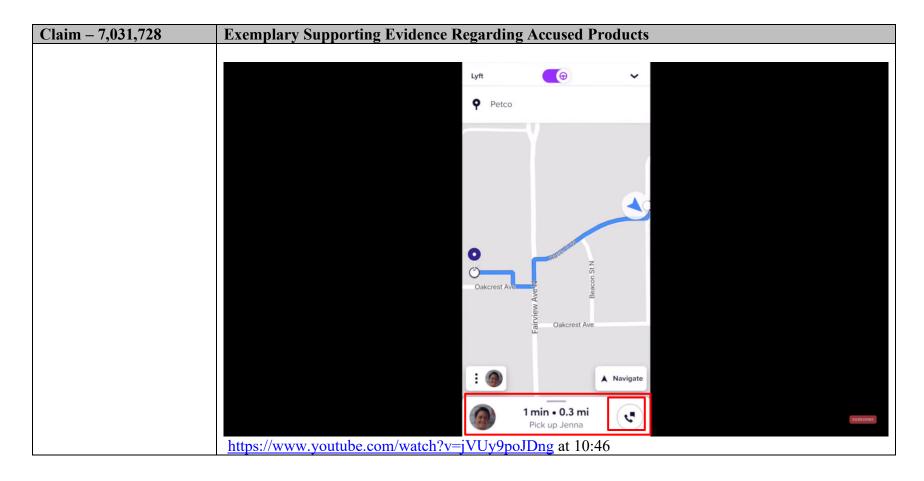
Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
	With respect to the limitations reciting the cellular phone number(s) or telephone number(s), the claim is met either literally or under the doctrine of equivalents.
7[C]. c) providing	The Lyft Accused Products practice providing initiating cellular phone calling software in each cellular
initiating cellular phone	phone that is activated by touching a symbol on the touch display that automatically initiates a cellular
calling software in each	phone call using the stored cellular phone number to the participant represented by the symbol.
cellular phone that is	
activated by touching a symbol on the touch	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
display that automatically	For example, the Lyft app provides selectable interface elements within the Lyft app to call the
initiates a cellular phone	rider/driver represented by a symbol. For example, when the driver is matched to the passenger, both
call using the stored	the driver and the passenger receive the call icon on their respective Lyft apps through which both the
cellular phone number to	driver and the passenger are given the functionality to call each other from within the apps. The call is
the participant	placed using a virtual phone number.
represented by the	
symbol; and	

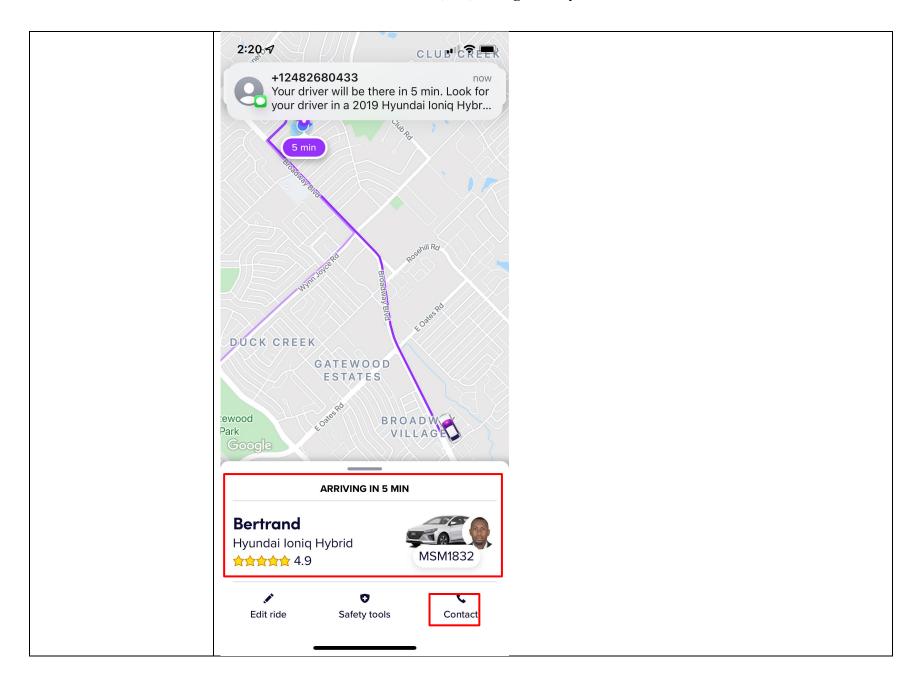
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1079 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1081 of 1092

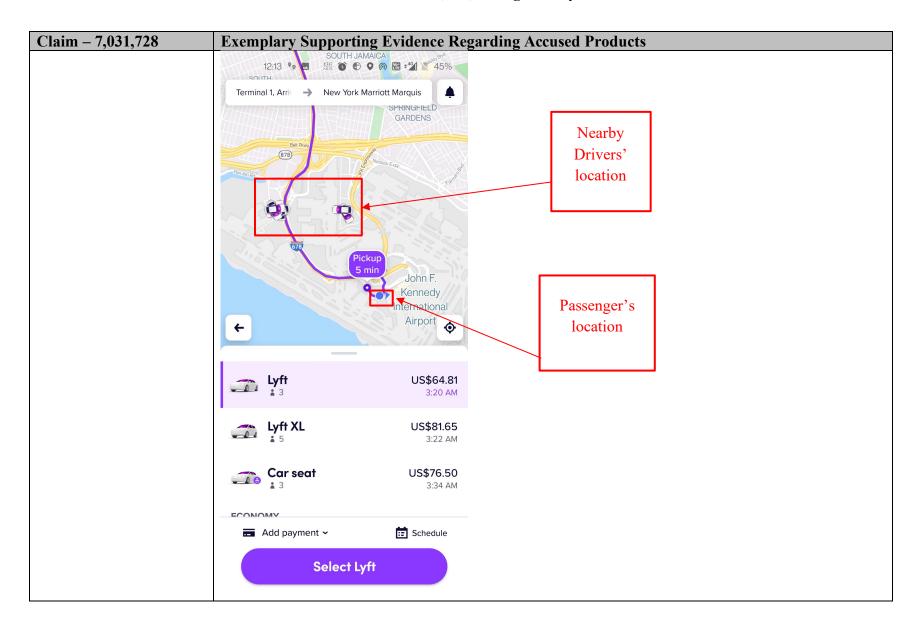




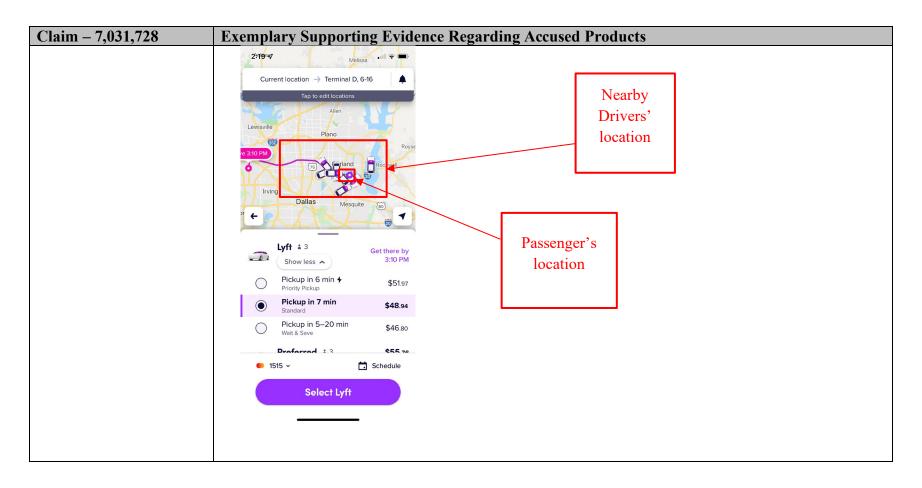
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1083 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
	The With respect to the limitations reciting the cellular phone number(s) or telephone number(s), the claim is met either literally or under the doctrine of equivalents.
7[D]. d) generating a geographical location chart on said display screen to show the	The Lyft Accused Products practice generating a geographical location chart on said display screen to show the geographical location of each of the symbols representing the participants in the communication network by latitude and longitude.
geographical location of each of the symbols	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
representing the participants in the communication network by latitude and longitude.	Lyft meets this limitation because it generates a display with a geographical map presenting symbols representing drivers/riders in the Lyft platform/network. A person of ordinary skill In the art would understand that a map is a type of chart. The symbols are presented in the geographical map based on their respective latitude and longitude. For example, drivers' and passengers' mobile phones with the Lyft Driver and the Lyft app installed generates symbols for riders/drivers. The maps in Lyft and Lyft Driver app also highlight the facility symbols such as a park, airport, and shops. The map in the Lyft app shows the location of the pickup address and the destination address when the passenger requests the ride.

Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1084 of 1092

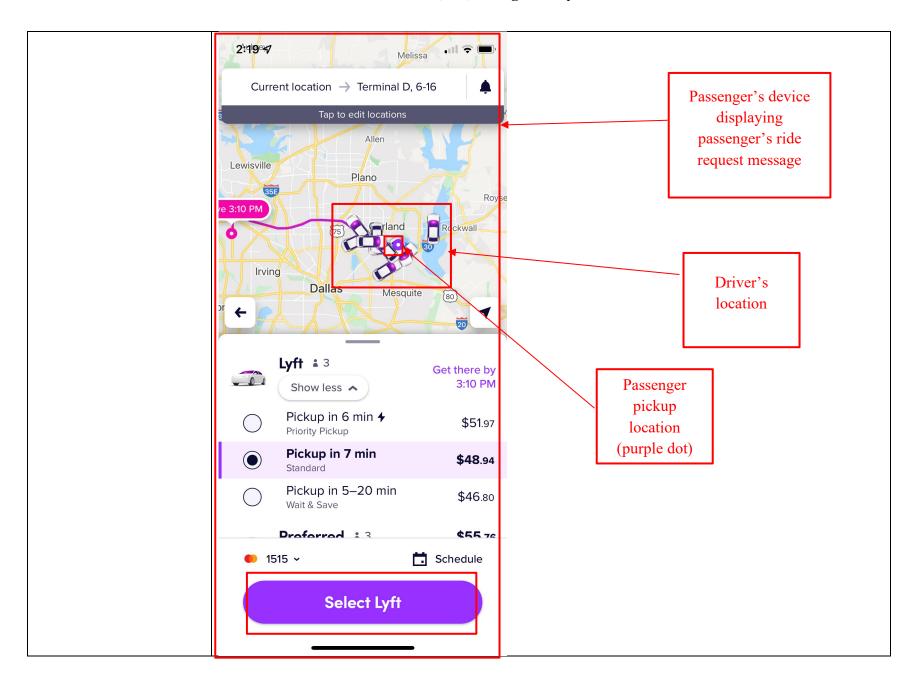


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1085 of 1092

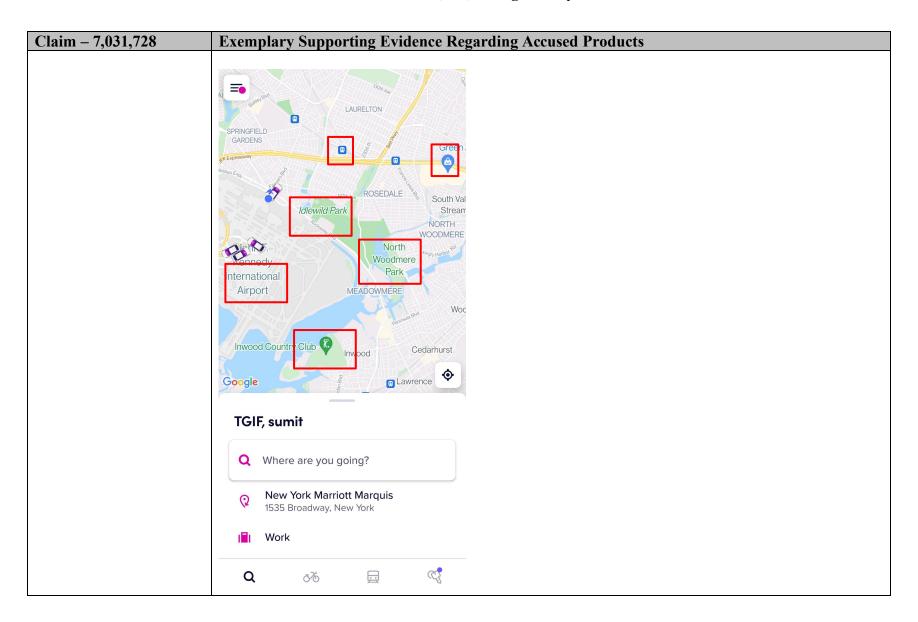


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1086 of 1092

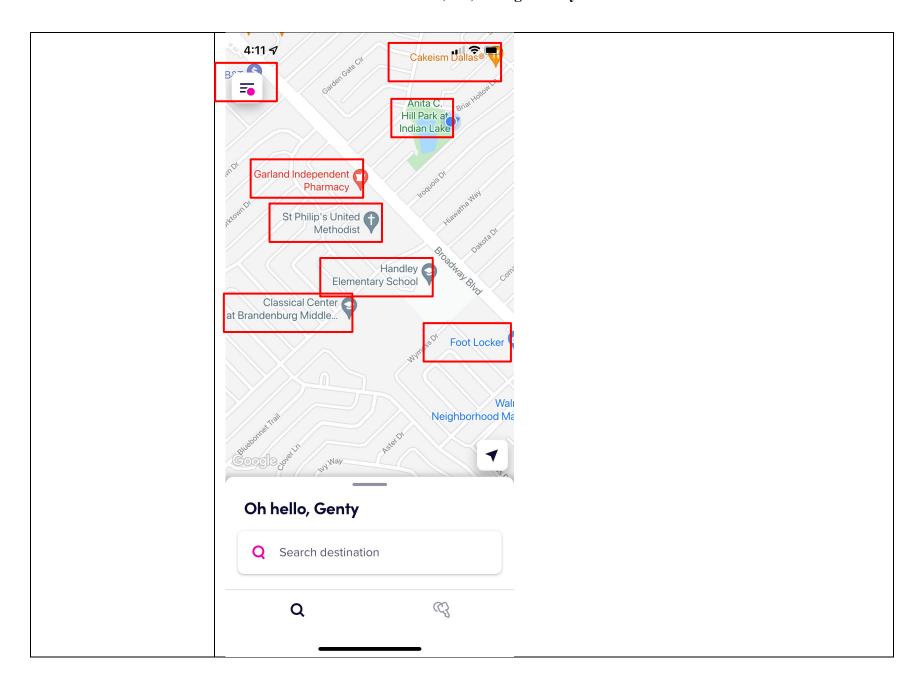




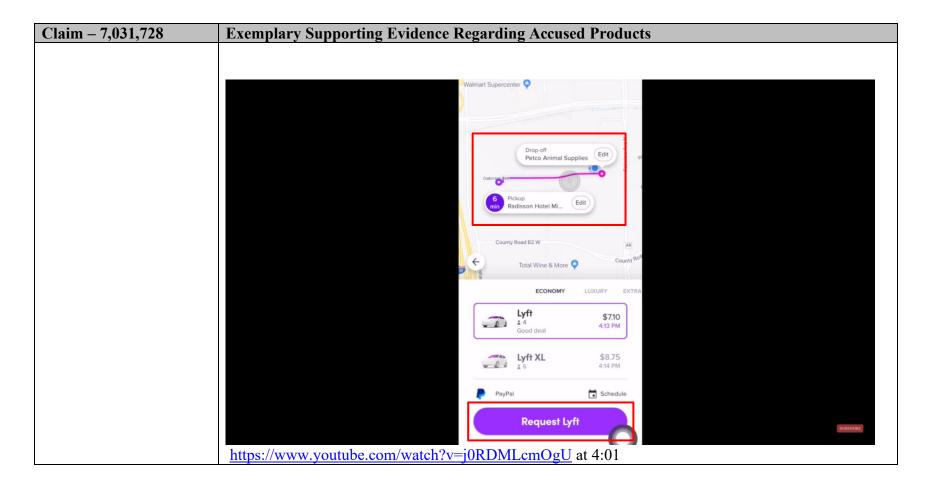
Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1088 of 1092

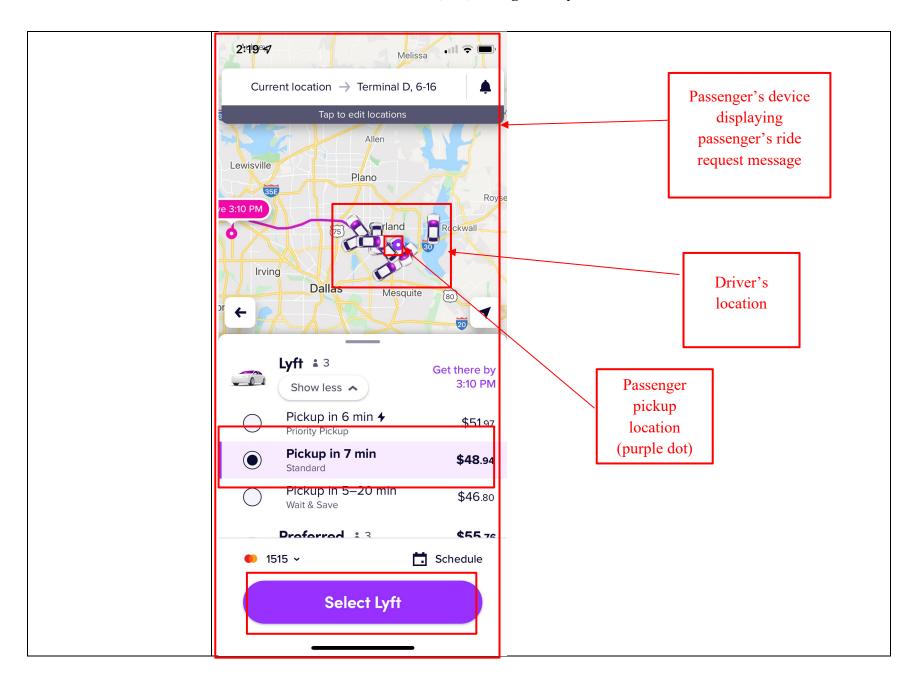


Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1089 of 1092



Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1090 of 1092





Case 5:21-cv-04653-BLF Document 98 Filed 04/13/22 Page 1092 of 1092

Claim - 7,031,728	Exemplary Supporting Evidence Regarding Accused Products
	Further, to the extent this element is performed at least in part by Lyft's software source code, AGIS reserves the right to supplement these contentions pursuant to production of such source code by Lyft and to the extent Lyft requires additional information in accordance with P.R. 3-1 and for any other reasons.
	See Claim 7[A] above.